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How to Earn the Merit Grant

H. MAJOR

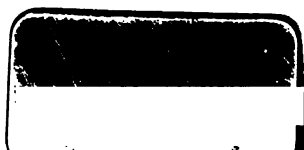


PART II. GIRLS' BOYS' & MIXED SCHOOLS

WITH FOUR ILLUSTRATIONS



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HOW TO EARN THE MERIT GRANT.

AN ELEMENTARY MANUAL OF
SCHOOL MANAGEMENT AND METHOD

FOR PUPIL TEACHERS, ASSISTANT AND
HEAD TEACHERS.

COMPILED FROM NOTES OF LECTURES DELIVERED TO A CLASS
OF EX-PUPIL TEACHERS.

By H. MAJOR, B.A., B.Sc.,

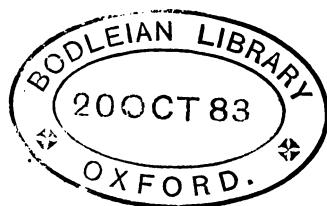
INSPECTOR OF BOARD SCHOOLS, LEICESTER.

PART II.—GIRLS', BOYS', AND MIXED SCHOOLS.

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1883.

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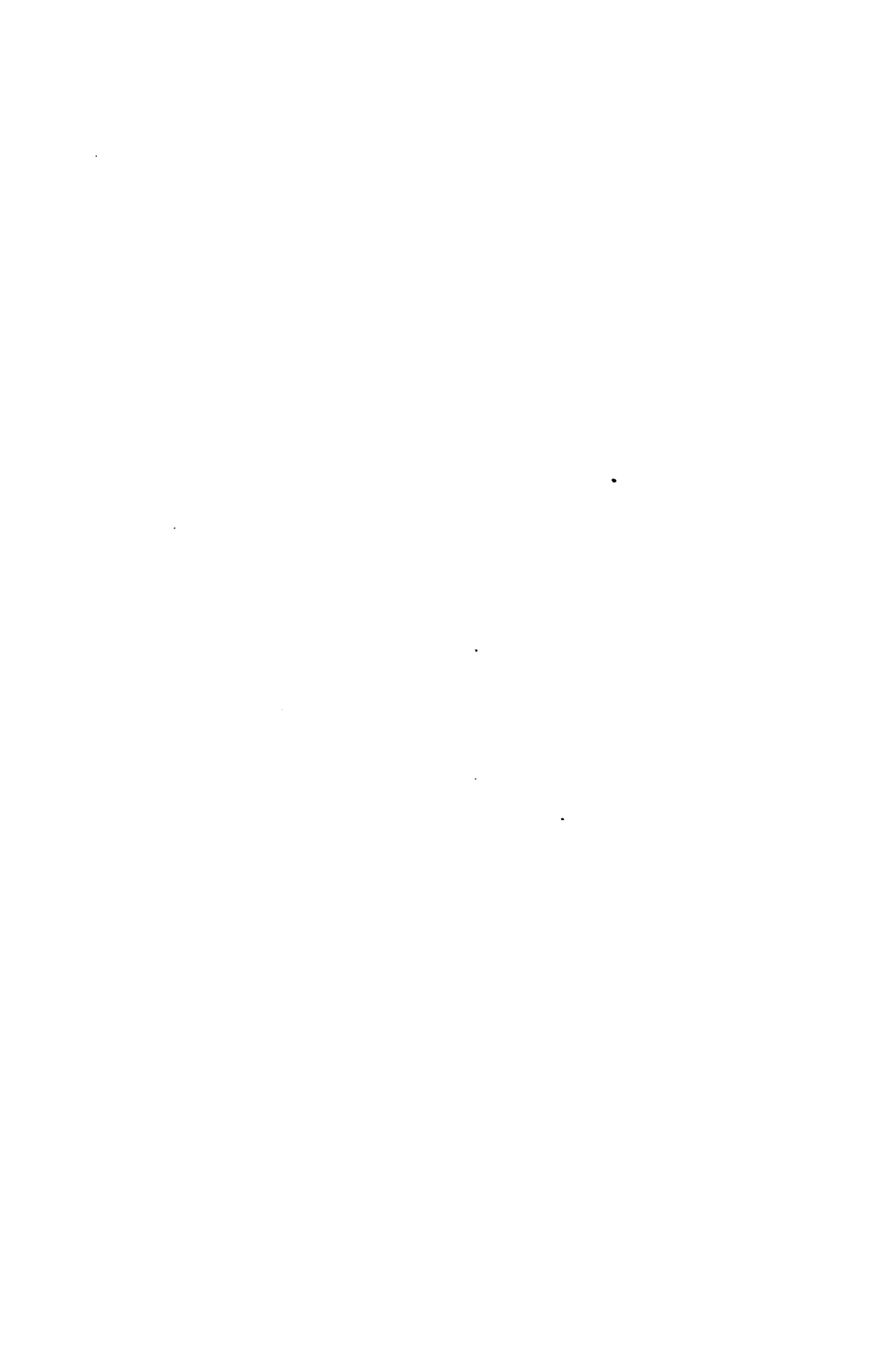
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PREFACE.

WE believe this is the first attempt that has yet been made (a) to incorporate the requirements of the "*New Code*, 1883," and of the "*Instructions to Inspectors*," into a practical manual of Method and School Management; (b) to break up the work of a school into the separate Standards, so that a teacher using the book may have definite instructions all brought together, and within a small compass.

It is hoped that these points will be hailed as a real help and advance by Head Teachers, especially as the subject matter has already been digested and assimilated by having been delivered as Notes of Lectures to a class of a hundred Pupil Teachers and Ex-Pupil Teachers; and put into practice by them in their respective schools.

LEICESTER, 1883.



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HOW TO EARN THE MERIT GRANT.

PART II.—BOYS', GIRLS', AND MIXED SCHOOLS.

INTRODUCTION.

MOST of the requirements demanded by the Government from Girls', Boys', and Mixed Schools are the same, especially in the "3 R's," in all three Departments. Practical hints useful to this common work are accordingly given in the earlier part of this Manual, Part II.; and specialities are dealt with subsequently.

The work is subdivided according to Standards for the convenience of Pupil Teachers and Assistants, for whom the Manual is chiefly intended; and general principles are discussed in separate sections. Besides the daily practical work of the school, the requirements of Government Examinations have been provided for, and "*Practical Hints given by her Majesty's Inspectors*" have been appended as a very useful portion of the treatise. It is, of course, assumed throughout that the Head Teacher sympathizes with the effort of the writer, and uses the Manual to enforce the lines of direction which, perhaps, may profitably be taken. At least, it may be hoped that the Manual will be useful in keeping the salient points of the subject constantly present to the view of the young teacher. All

Head Teachers have special Methods of Instruction, according to which their staff must work ; but the juniors are required by the Government to know, and at Examinations to discuss, *all* the various methods.

Thus one Head Teacher may select the Alphabetic method of teaching to read, but the staff should also know the leading principles of the Look-and-Say, Phonic, Combined Method, etc. The best teachers, doubtless, elaborate plans of their own, combining the best points of *all* the methods ; so that even in this direction the general outlook of the subject will, perhaps, be useful.

The Manual has been divided into Parts I. and II., the former for Infant, and the latter for Boys', Girls', and Mixed Schools. This has been done in order to save the juniors some trifling expense ; but in the writer's opinion Part I. is as necessary to young teachers in Boys', Girls', and Mixed Schools as it is to Infants, since every junior should be taught the nature of a child, and the principles of Collective Teaching. The two parts are therefore issued together as the "Complete Course" in one volume.

To save space the practical hints given have been written tersely, and in order that the living voice of the Head Teacher may illustrate and amplify these. When mistakes in teaching are made by the individuals of the staff, it would be useful for the Head Teacher to refer the junior to the hints and warnings contained in the Manual, and to insist on knowing how it is that instructions contained therein (if approved by the Head Teacher) have been ignored or violated.

CHAPTER I.

STANDARD I. (BOYS', GIRLS', AND MIXED SCHOOLS.)

SCHEDULE I. (NEW CODE, 1883.)

READING.—“*To read a short paragraph from a book not confined to words of one syllable.*” (“*Reading with intelligence will be required, with fluency and expression. Two sets of books must be provided. The Inspector may examine from any of the books in use in the Standard. The intelligence of the reading will be tested partly by questions on the meaning of what is read.*”)

WRITING.—“*Copy in manuscript characters a line of print, and write from dictation not more than ten easy words, commencing with capital letters. Copy-books (large or half-text hand) to be shown.*” “*The Writing (and Arithmetic) of Standard I. may be on slates or paper, at the discretion of the managers.*”

ARITHMETIC.—“*Notation and Numeration up to 1000. Simple Addition and Subtraction of numbers of not more than three figures. In Addition not more than five lines to be given. The Multiplication Table to 6 times 12.*”

“*Short exercises in Mental Arithmetic may be given in the examination of all Standards. These should not involve large numbers, should from the first deal with concrete as well as abstract quantities, and should be preparatory to the work of the next higher Standard.*”

EXPLANATION OF SCHEDULE I. (STANDARD I.)

A. READING.—The teacher should note that the words of the reading-book are not “*confined to those of one syllable.*” This should not lead to the false impression that monosyllabic words are the simplest: generally speaking, it is the words of *one* syllable that are the most difficult, because the most irregular. Compare *one, eyes, yes, etc.*, with *jumping, singing, garden, mother, etc.*

Besides the *accuracy* implied above, the Inspector will test—

- | | |
|-----------------------------|-------------------|
| (1) The <i>intelligence</i> | } of the reading. |
| (2) The <i>fluency</i> | |
| (3) The <i>expression</i> | |

(1) The “*intelligence will be tested partly by questions on the meaning of what is read.*” By this it is not meant, merely, that individual words will have to be understood; but also the general sense of the clause, phrase, or sentence will have to be rendered into the *child's own language*. The “meanings” given in reading-books are only one of several that should be known, and not always the best that might be selected. These lists of words will, however, be useful for spelling purposes.

(2) The *fluency* refers to the ease and facility with which the passage must be read. The words should not be given in a *staccato*, jerky manner, but, as in music, the passages must be *phrased*, or broken up, into natural divisions. The articles especially should be smoothly associated with the nouns, and the nouns with the verbs, as *The boy went*, etc., not *The—boy—went*, etc.

(3) By *expression* it is meant, that proper *emphasis* should be laid on the *notional* words (the noun, verb, and adjective), while the *relational* words (preposition, conjunction, etc.) should be smoothly uttered. [It is, of course, the teacher and not the class that knows which are

notional, and which relational words, but the children will imitate the teacher's expression, and gradually catch the idea referred to.]

B. WRITING.—This includes spelling, which really belongs rather to the reading, and ought to be taught and examined with it.

Occasional writing on paper, even in Standard I., will be found to conduce to neatness, and is always enjoyed by the scholars.

The writing should be of the same size as in the copy-books, namely, large and half-text; this gives freedom, fluency, and sweep; and the size can be reduced in Standard II. The writing of Standard I. is generally too small, and thus becomes cramped and ill-shaped.

Most of the writing should be from the blackboard, both the single words, and "lines of print;" and "transcribing" should only be used towards the end of the school year. In this respect, as elsewhere, the motto should be "*Festina lente—make haste slowly.*"

The "*easy words*" should be principally notional words (noun, verb, adjective), within the actual experience of the child; or selected out of the reading lessons. These will include the names of *objects* in the school, street, fields house, etc.; the simplest *actions*, jumping, flying, hunting, etc.; and the commonest *attributes*, good, bad, etc. (*Quality*); many, twelve, etc. (*Number or Quantity*); large, small, etc. (*Size*); round, square, etc. (*Shape*); black, white, etc. (*Colour*).

These selections will lead the way to the noun, adjective, and verb, subsequently required in the "English" exercise.

C. ARITHMETIC.—By *Notation* is meant the setting down on slates or paper of abstract numbers from dictation.

By *Numeration* is meant the reading off of abstract numbers thus set down.

It will be noted that the numbers in Addition and Subtraction, are limited to 999, or three figures. These should be understood as *wholes*, as page 47, etc., and should be *analyzed* into units, tens, and hundreds, the relative values of the "places" of hundreds, tens, and units, being thoroughly well taught.

The Multiplication Table should not only be learnt *as a table*, up to 6 times 12, but also by means of concrete examples, as two rows with four desks in a row, make eight desks, etc. The tables should also be taught backwards, as well as forwards, and so sung or said, as well as in halves, 2 times 1 are 2, up to 2 times 6 are 12, then backwards; and similarly from 2 times 7 are 14, to 2 times 12 are 24, and then backwards.

Moreover, the 0 times table, and the 1 times table, though, unfortunately, not given in table books, should also be learnt, as these are as frequently required in multiplication as the other figures. These omitted tables are set down at length:—

0 × 0 = 0	1 × 0 = 0
0 × 1 = 0	1 × 1 = 1
0 × 2 = 0	1 × 2 = 2
0 × 3 = 0	1 × 3 = 3
0 × 4 = 0	1 × 4 = 4
0 × 5 = 0	1 × 5 = 5
0 × 6 = 0	1 × 6 = 6
0 × 7 = 0	1 × 7 = 7
0 × 8 = 0	1 × 8 = 8
0 × 9 = 0	1 × 9 = 9
0 × 10 = 0	1 × 10 = 10
0 × 11 = 0	1 × 11 = 11
0 × 12 = 0	1 × 12 = 12

Again, every "table" should include 0. Thus:

2 times 0 are 0 etc.

3 „ 0 „ 0 „

4 „ 0 „ 0 „

5 „ 0 „ 0 „

6 „ 0 „ 0 „

The tables should also be learnt in all the possible forms, thus :

$$3 \times 3 = 9,$$

and 3 times 3 are 9,

and $3 \times 3 =$ (blank, to be filled in by scholar).

INSTRUCTIONS TO H.M.'S INSPECTORS.

In addition to Schedule I. of the Code, it will be necessary to meet the requirements set forth in the "Circular to H.M.'s Inspectors, 9th August, 1882," as appended herewith.

READING.—"*In Standard I. two ordinary reading-books may be used, unless the managers prefer that the second book should be a Geographical or Scientific reader, to suit the second Class Subject. In Standard I. intelligent reading will probably suffice to justify a pass without much examination into the matter of the book; but it should be considered a grave fault if children have been allowed to read the same lesson so often as to learn it by heart, and to repeat it without any but occasional glimpses at the book. As a general rule, the examiner should be careful rather to ask for the meaning of short sentences, and phrases, than to require explanation of single words by definitions or synonyms.*"

WRITING.—"*In Standard I. the writing exercises should, as a rule, be done on slates, and should be regarded chiefly as a test of hand-writing, i.e. of the child's power of making and combining script letters*

(small and capital), and accurately transcribing print. My Lords do not pledge themselves to any particular style of writing or method of teaching it, but it should at least be bold and legible, and the text adopted should be sufficiently large to show that the child is acquainted with the proper forms and proportions of letters. In dictation none but the easiest and most familiar words, and those chiefly monosyllables, should be given out, and a pass should not be withheld if six out of the prescribed ten are correctly spelt and written.

In all cases, where a dictation exercise is given, the teacher may be permitted, if he desires, to read the passage (words in Standard I.) over to the children before it is dictated by the Inspector. In Welsh-speaking Schools the teacher may be allowed to give out the whole of the dictation.

MENTAL ARITHMETIC.—"Mental Arithmetic is a new requirement, but it is not intended to form an addition to the individual examination for the purpose of recording the "passes" in the Schedule.

It is a class exercise, and may often be satisfactorily tested by requiring the teacher of the class to give a few questions in your presence, and by adding at discretion some questions of your own. The object of this exercise is to encourage dexterity, quickness, and accuracy in dealing with figures, and to anticipate, by means of rapid and varied oral practice, with small numbers, the longer problems which have afterwards to be worked out in writing. Practice should be given in all the ordinary processes of Arithmetic, e.g. in Standard I. Addition, Subtraction, and Multiplication, with numbers up to 50, and money up to 2s."

CHAPTER II.

READING. (STANDARD I.)

READING aloud means the translating of written or printed symbols (letters, words, and sentences) into spoken language or sound. Here, manifestly, two of the "senses," or avenues to knowledge, are made use of.

(1) *Sight* through the instrument, or organ of the eye ; and

(2) *Hearing*, through the instrument of the ears.

In other words the *visual* sign is converted into the *auditory*.

In actual experience the latter is first made use of by the babe, and only at a later stage is the appeal made to the eye. The school method inverts this order, and first trains the sight ; and afterwards links this experience to uttered speech.

In order to read well, therefore, the requirements will be—

(1) A quick and accurate *eye*, to recognize the likenesses and differences of letters, and words.

(2) A quick and accurate *ear*, to recognize the likenesses and differences of sounds, uttered

(a) By the teacher, and

(b) By the scholar himself.

So far *accuracy* only is secured ; to secure (1) *intelligence*, (2) *fluency*, and (3) *expression*, the child must be made—

- (1) To *understand* what he is reading ;
- (2) To be kept apprehensive and nimble-witted ;
- (3) To be made cultured and refined, within the limits of his powers, to appreciate humour, pathos, surprise, love, and other emotions.

The accuracy of *sight* will be largely secured by the teacher's use of the blackboard ; the child at this stage translating script into printed symbols, and *vice versâ*, without difficulty.

In order to acquire trained accuracy of *ear*, the teacher will have to set a good example of—

- (1) *Clear enunciation* ;
- (2) *Correct pronunciation* ;
- (3) *Pure rendering of the vowel sounds* ;
- (4) *Sharp, distinct utterance of consonants*, especially of final consonants.

To this end simultaneous reaning should be largely made use of *at first*, after the teacher ; but this must always be subsidiary to individual reading. The greatest fault of reading in general is the too great amount of simultaneous reading, behind which an inefficient, or idle teacher, screens his incapacity, or want of energy.

Moreover, the teacher should make a study of the use of the different parts of the organs of speech, and of the prevailing provincial faults of utterance of the district. He should know, for instance, that the different sounds of the Alphabet may be divided as below :—

Consonants.

LIQUIDS.	LABIALS.	GUTTURALS.	DENTALS.	
l, m, n, r.	b, v.	g, j.	d, z, s.	Soft.
	p, f.	q, k, c, ch.	t, s, x.	Hard.

Vowels.

SIMPLE.	COMPOUND.
a, e, i, o, u, y.	ai, ei, oi, au, eu, ou, oy, ow.

He should also write down in his note-book, or in an interleaved page of this Manual, the provincial false vocalization of his own district.

Thus in some parts of England the *ā* is sounded as *e*; the *ē* as *ā*, etc.; in others *litttle* is called *likkle*, etc., etc.

The great difficulty here is that the young teacher's *own ear* is generally at fault; he has been brought up in this wrong-doing. In this matter he must cheerfully and willingly copy the purer utterance of the Head Teacher.

The teaching of Spelling should be properly associated with that of Reading, the difficult words being underlined in blue pencil by the teacher in his own copy of the reading-book, and written on the blackboard previously to the reading lesson proper, for learning and transcription by the class. These should be again noted in the reading, but so as not to interrupt too much the current of thought from the reading matter. The words should be broken up into syllables; sometimes according to the etymology, but generally according to the phonetic character of the word. Thus "*coming*" should be divided into "*com-ing*," in order to isolate the present participle ending; on the other hand, "*writing*" should be divided thus, "*wri-ting*," to mark the sound of the long *i*.

In thus learning to spell, two mental bonds are made use of—

- (1) The *visual*; and
- (2) The *auditory*.

In addition, verbal memory is fixed by *muscular effort*, either of the muscles of the organs of speech, or of those

of the fingers employed in writing out the words on slates. The teacher should not fail to call attention to the Form and Structure of the hard words as they are being read, nor to ask for the spelling of the word without the book. Anything which *concentrates* the attention, leads to success in learning. The same end is secured by letting the class pick out the hardest words for transcription.

Children of the working classes generally spell *book* words better than the names of things in the experience of their daily life but seldom mentioned in books. This should be provided for by lists of names of things in the street, etc.

READING METHODS.

The various methods of teaching to read have been dealt with at some length in Part I. At this stage it will be generally found, that the method used by nearly all teachers is an unconsciously Combined Method. It will only be necessary, therefore, to summarize the methods of teaching to read for Examination rather than for any other more practical purposes.

THE LOOK-AND-SAY.—Since twenty-five per cent. of all the words of the English language are of irregular formation, to this extent every method of teaching to read must be purely Look-and-Say. This method generally ignores Spelling: in some cases, however, teachers teach the spelling of the more difficult words in the upper classes. The word is regarded as a *whole*, as in adult reading, and is fixed into the consciousness of the learner, by visual and auditory repetition. This is the method generally adopted, therefore, in classes above the Infant School. As a rule, there is too much of the "Say" of the teacher in it, and too little of the "Look" of the child, as proved by the unreadiness of the learner when tested in a book not before seen by him. The child ought always to be taught, and left,

to make an individual effort of his own to decipher the unknown word, and only helped when unable to accomplish this. The pernicious habit of guessing should be stringently checked.

THE ALPHABETIC.—In this method the letters are synthetically built up into syllables and words. When this has been long done the most common combinations and uses of letters are unconsciously acquired by practice; but the difficulties of the alphabet are ignored; and the children have to learn more by faith than by sight. As this method fixes the attention closely on the individual letters of words, it greatly assists the Spelling, and that is the most that can be said for it.

With unskilled teachers it is a favourite method; and this partly because it requires less power of analysis than the Phonic.

The PHONIC methods are various; but the common principle underlying all of them, is the association of the visual signs of the letters with the *sounds* or *uses*, rather than with their mere *names*; and the grouping together of combinations representing single sounds, as if they were single letters. Such compounds are regarded like the "Compound Radicals" of Chemistry; thus *ph*, *ow*, *final ng*, etc., are regarded as simple elementary sounds. This is very elaborately carried out in the Robinson's Phonic method, but the Home and Colonial Phonic is more analytic. In Robinson's the word *mat* would be synthetically built up of the sounds *m*, *a*, *t* (under the names of their *sounds*); but in the Home and Colonial *mat* would be given as a *whole*, and the uses or powers of *m*, *a*, *t*, would be deduced from this. Or the syllable *at* would be first given and then compounded with the initial *m*, *h*, *p*, *r*, etc. The difficulty here, as in all reading methods, is with the words of irregular formation, with silent letters, etc., *high*, *though*, etc.

THE PHONETIC.—This is a Phonic method, with different type to represent the various sounds required. The objection to it is the use of additional signs to make up the forty sounds used in ordinary speech and reading ; these having to be afterwards dropped when the children have acquired a sufficient vocabulary to enable them to read from ordinary script or print.

This difficulty is met in the Phonic method by the use of *diacritical* marks over or under the ordinary signs (letters) ; but the type for even these has to be specially cast for the purpose. The Phonetic method also uses a different spelling from that in ordinary use, as *Fonetik* for Phonetic ; and this frequently obscures the etymology or derivation of the word. Thus the initial *ph* generally marks a Greek origin of the word ; but this is unseen in the *f*.

THE COMBINED METHOD.—There are nearly as many combined methods of teaching to read, as there are individual teachers. Each forms, unconsciously in most instances, a combined method of his or her own. Thus the irregular words are taught on the purely Look-and-Say method, except that Spelling is resorted to for purely spelling purposes. Again, the Alphabetic method is incorporated, but it should be mostly used for the regular words or syllables only.

Messrs. Dalby and Isbister have published Primers and Reading Sheets which have furnished the most complete Combination Method yet published. This is, however, disfigured with too copious lists of words out of their organic connection, that is, outside of their uses as part of intelligible sentences.

MODEL LESSON IN READING. (STANDARD I.)

Apparatus required : Blackboard, chalk, duster, reading-books.

[Time, 30 minutes. Class in desks or, better still, round the desks or on the floor in three sides of a hollow square, the teacher at the fourth side. Sometimes the class is arranged on the floor in rectangular form, with corners rounded, toeing a chalk line or brass-headed nails ; while the teacher travels round the class from the *outside* while the individual reading goes on.]

Introduction.—Select about a dozen of the hardest words in the lesson to be read, and write these on the blackboard. Let the children read these simultaneously and individually three times each, and then write them on their slates. Turn the latter over, and elicit interest in the subject matter of the lesson (suppose it is on the Horse) by a few pertinent questions, but do not let the reading lesson become an Object Lesson.

The Reading Proper.—The teacher should read the whole lesson through, slowly and distinctly, taking care that the children “keep their places” in following her. She should next read out the first sentence, and let the class repeat this simultaneously (in the earlier part of the school year). The same thing should be done by an individual child. The difficult words should be noted, spelt, and explained, and the meaning of the passage as a whole demanded in the language of the child. If the class be a backward one, “pointing” to the place in the books may be permitted, but not in an upper section of Standard I., as this checks fluency. In the repetition, *expression* must be attended to by the teacher, and demanded from the child. This is a point really enjoyed by the children, who are eminently imitative and dramatic, if their susceptibilities are not

repressed by unsympathetic treatment or ridicule, the employment of which would be almost unpardonable on the part of the teacher.

Pick up the backward and inattentive children by calling on them to read unexpectedly.

Do the same with the next sentence, and so on to the end, taking care to measure the amount of practice, explanation, etc., so as to go through the whole lesson (if it is of proper length), within the allotted time, reserving five minutes for the words on slates to be learnt by rote.

In this exercise there will be, on the average, about one-fourth (25 per cent.) of irregular words (with silent letters, etc.), such as *know*, *night*, etc. These will have to be learnt on a purely "Look-and-Say" method, and fixed by constant reiteration.

Insist throughout on *loud* reading by the class. Never allow inaccuracies, especially of small words, to pass unchecked, as *was* for *saw* (the child involuntarily reading backwards.)

ILLUSTRATION OF THE READING LESSON ABOVE.

[The periods (.) mark the "*phrasing*" of the teacher; the words in *italics* are those to be selected for *spelling*; and the words in clarendon type (*mane*) those which ought to be *explained*. The judgment of the individual teacher may be left to determine which of the words to be spelt also require to be explained; and what phrases should be given in the child's own language.]

(Major's Crown Reader—Standard I.).

The Horse.

Spellings.

mane	tail	watch	ought
kept	very	else	whip
smooth	stuff	roads	also
rough	plait	iron	rain
next	guard	limps	knives

1. "We do not think · that there is · one boy or girl · in the class · who has not seen · a horse."

2. "Let us see · what we know · about a horse; · and I will tell you · more about it. What do you call · the hair · which **flows** · from the neck? That is the *mane*; · and you will find a mane · on the ass, · and on the lion, too."

3. "But all its skin · has hair on it · as well; · but the hair there · is not so long · as it is · on the mane, but is *kept smooth* · and short."

4. "When it is cold, · we turn the horse · into the **fields** · if we have no work · for it to do. · And we let its hair grow long · and *rough*, · to keep it warm · when the snow · is on the ground, · and the wind blows cold" [and so on].

PRACTICAL WORK.

Have a picture of the horse ready for the lesson. Write out the spellings on the blackboard, the children repeating them as they are written, simultaneously and individually. Let the class write some or all of these, according to their stage. Ask a few questions about the horse, referring to its colour, size, disposition, etc.

The teacher then reads the lesson, the children following her in their books. She then reads sentence, or paragraph No. 1, according to the stage in which the class is; taking care of *expression*. The class imitates the teacher in doing this; and the sentence or paragraph is repeated by an individual. In doing this the teacher should call attention to the spelling of *think*, and compare it with *sink*, *drink*, etc; do the same with *girl*. Repeat this for each paragraph.

Questions for Intelligence.—Where does a horse's mane grow? What other animals have manes? What use do we make of the long hair on a horse's mane and tail? Where does the horse feed? etc., etc.

The most important factor in reading is *Expression* or *Emphasis*. By this we mean—

(1) Laying the *stress of the voice* on the word, or words, which express the chief thought of the writer, whether this be—

(a) *Notional*; or

(b) *Relational*.

(a) Thus, if the chief thought be *notional*, we shall have this expressed in the nouns (or pronouns), verbs, and adjectives, which must therefore be duly emphasized as—

Noun. Will you give me the *penknife*?

Pronoun. Will you give me the penknife? or
Will you give *me* the penknife?

Verb. Will you *give* me the penknife? or
Will you give me the penknife?

Adjective. Is it a *good* penknife?

(b) If the chief thought of the writer be *relational*, which it rarely is, the piece will be read so as to bring out—

(i.) *Similarity* or *Comparison*, as

“Man’s life is a flowing river.”

(ii.) *Unlikeness* or *Contrast*, as

“I said an *older* soldier, not a *better*.”

Or,

(iii.) *Relation*.

“By my sword I won it, *with* my sword I will keep it.”

These relational words are conjunctions, prepositions, etc.

(2) Besides Emphasis, Expression refers to *Pause* and varying *Rapidity* of utterance. Thus we should read the following line slowly, and with laboured breath, to suggest *difficulty* :—

“Up the high hill he heaves a huge round stone.”

The following extract will show the value of the pause :—

"Nay; call me not fool, till heaven hath sent me fortune.

* * * *

And after one hour more—'twill be eleven—
 And thus from hour to hour—we ripe and ripe;
 And then from hour to hour—we rot and rot;
 And—thereby hangs a tale."

Two or more adjectives before one noun should have a pause between them, as "he heaves a *huge, round* stone." Words repeated should have a pause to mark the repetition, as "Far, far away;" "Stop! stop! my friend!" On the other hand, no stop should be made at the ends of lines of poetry unless the punctuation mark is used or the sense requires it.

(3) Lastly, Expression includes *Pitch*, or Tone of Voice.

The most general rule for the use of a high or low pitch is that command, anger, and entreaty, especially if the latter be passionate, ends in a *high* tone of voice (with rapid speech). The same tone is adopted in questioning, as "Did you go?"

On the contrary, a *low* pitch is chosen to express grief, sorrow, regret, or helpless pain.

Perhaps the whole of the above may be summed up in the following—"Try to induce the children to *read* as they *talk*." This, of course, implies that they *understand* what they are reading, but they must be *taught* to do so.

All the class must be at work at the same time. To this end special attention should be given to the corners of the class in drafts, that is, to the children placed where the two flanks meet the centre at the angles. The same remark applies to the ends of the rows of children, and the back row, with a class in desks; and lastly, to the backward children, who should be placed nearest the teacher, and who should have most of the individual reading and teaching.

Throughout the lesson, good expression and liveliness on the part of the teacher and class should be kept up.

From time to time simple words of a similar construction and sound to those in the book should be written on the blackboard.

The teacher should be in front of the class in desks, where she can be best seen and heard ; but not so as to be overlapped by the ends or sides of the class, or so near the front row as not to be able to govern them with her eye.

The teacher should carry the passage to be read in her visual memory, so that her eyes may be devoted to watching the children's mouths ; and for this purpose the children should be forbidden to cover their faces behind the reading-books.

SUMMARY OF TEACHING TO READ. (STANDARD I.)

MAXIMS.—(1) Be careful of your own *Pronunciation*, and that of the class.

(2) Let the *Enunciation* of yourself and of the class be pure.

(3) Encourage a *fluent* (flowing, smooth) style of reading ; but do not let the children gabble, or read too quickly.

(4) Encourage the children to ask questions on the subject matter of the lesson ; and illustrate the latter to foster *Intelligence*.

(5) Try to make the children catch the spirit of the lesson, and render this in suitable *Expression* ; rather exaggerating than not giving sufficient dramatic effect. Let the stress of the voice (*Emphasis*) fall on the notional words, and make *Pauses* according to sense and feeling, rather than according to stops (*Punctuation*). Sad narratives should be read slowly ; merry ones trippingly ; and didactic (moralizing) portions with weight and solemnity. Use the Poetry of the book chiefly to inculcate expression ; and let the class learn other Recitations for the same purpose.

DIFFICULTIES TO BE ANTICIPATED AND MET.

(1) Slovenly, thick, blurred *Enunciation*, as if coming from too thick lips, or too large tongue, on the part of the children. This is to be cured by insisting on clear enunciation of the *elements* of the words; either as simple vowel sounds, and consonants (as in lispings), or of syllables, especially final syllables, as in *bird's-nests*, *winds*, *robbing* (the final nasal *ng* is generally very troublesome to the teacher).

(2) Faulty *Pronunciation*—

- (a) *Omission* of syllables; as *anmals* for *animals*.
- (b) *Insertion* of syllables, or letters; as *umberella* for *umbrella*; *lawr* for *law*, etc.
- (c) *Confusion* in groups of allied words; as *though*, *through*, *thought*, etc.
- (d) *False vowel renderings*; as of *oi* for *i*; *foine* for *fine*, etc.
- (e) *Wrong quantity*; as *māny* for *many*; *can'al* for *canal*, etc.
- (f) *Dropping out the h*, or aspirating it before open vowel sounds; as *air* for *hair*, or *hair* for *air*.
- (g) *Local Provincialisms*, too numerous and varied to mention.

(3) Failure of attention of the individual children, and their eyes being withdrawn from their "places." The former must be overcome by the teacher keeping lively, nimble, alert, and interesting; the latter by a quick eye on the part of the teacher.

(4) It is exceedingly difficult in Standard I. to teach the class to consider the lesson as a *whole*, in its *subject matter* and teaching, apart from its use as a mere *reading* lesson proper dealing mainly with *words*. The teacher must be content, at first, to use the lesson in the latter direction, and wait for the former use of it until the class

has overcome the difficulty of the freshness of the new vocabulary.

(5) The correction of the Spelling Exercises in a large class presents some difficulty; but the teacher should make up her mind as to which of the words are most likely to be spelt wrong, and cultivate the power of rapidly detecting mistakes.

The reasons why our language is so difficult to read and spell are given in Part I., and are mainly founded on (a) its *varied origin*; (b) the tricks of the *printers* in past times; (c) the *Imperfections of our Alphabet*.

The main reason why it is so difficult to persuade children out of provincial pronunciation of letters, syllables, and words is that their *ears* are deficient in recognizing slight differences of tone. That is, the *standard of appeal* is vitiated. Of course they cannot recognize this until their ears have been trained; there is no inner consciousness of difference, as court of appeal, to refer to.

Lastly, some voices are naturally harsh and disagreeable. This depends on the vocal chords and cartilages, and on the suppleness of the organs of speech generally (lips, cheeks, tongue, etc.).

PRACTICAL HINTS FROM REPORTS OF H.M.'s. INSPECTORS ON READING. (STANDARD I.)

"I would urge upon teachers to give object lessons upon chapters in the reading-books. An object lesson on some subject in the reading-books, say silkworms, with the actual things shown to the children, and compared with the descriptions in the book would be found more useful than ordinary object lessons. The teacher would have the lesson ready in his hand, and would only have to explain more fully, and the children would not only give better attention, but could another day be set to read the chapter over again. Some-

thing would be retained instead of all being dissipated like the particles of chalk wiped off the blackboard."—MR. BAILEY.

"Intelligence in reading is too rare, so, too, are accuracy and expression of the children. In town schools, where every class has its own teacher, these faults might to a great extent be overcome if the teacher would make it a constant habit to read aloud to the class, paragraph by paragraph, the passage chosen for the lesson. Too often reading is not taught; it is only heard."—MR. BALMER.

"Large classes are best taught to read with expression in schools where it is the custom for the scholars to read simultaneously after the teacher, clause by clause, strictly imitating his slightest shades of accent, as they will do when properly trained. In no other way can time be found for giving each child the sufficient amount of vocal practice.

"Of course it must be supplemented by occasional individual reading. In the hands of a dull teacher the exercise degenerates into a high-pitched monotone or drawl, because he does not compel his class to follow closely his own accent and tone.

"It is when the questioning on the matter of the reading-books begins that the examiner feels first astonishment, and then despair; for fairly expressive reading taught by frequent mimicry of the teacher's voice may be accompanied by the dimmest notion of the meaning. The difficulty lies not so much in the lack of a vocabulary, as in a want of intelligence. It may be that the long words had been explained to the children either in the notes or by the teacher, but the latter had most probably never explained the drift of the passage, and its connection with what precedes or follows."—MR. EDWARDS.

"I believe the expression would improve if the teachers began with the young children, for these are very good mimics."—MR. JARMAN.

"The failure in intelligence arises from the want of a

more intelligent system of training the children to observe and think for themselves; and to study the meaning of the entire sentence, as well as of its component words. Exact definitions are, of course, not to be looked for at this early stage; but teachers should prepare a child to show, in its own simple language, that it really apprehends what the words represent. It is hardly possible to open any page of a book without meeting with one or more of the syllables ful,—ous,—y, and the opposite—less, as for example, careful, joyous, happy, thoughtless. It need not take long to explain the meaning of each of these syllables, and to illustrate their use by copious examples. There is no reason why every child in Standard I. should not know them. The exercise will prove highly interesting, and it will be found that the thorough understanding of these syllables will furnish a key to the meanings of many hundreds of words.

“Every word learned in this way becomes a help to the understanding of other words of the same class; the children are thus trained to think for themselves, they become conscious of daily increasing ability to deal with fresh words which occur in their lessons, and under the guidance of their teacher more difficult words are one by one intelligently mastered till in the upper classes, they are able, not only to understand but also to give a very good account of what they read.”—
MR. FUSSELL.

“I take reading with intelligence to include two things: explanation of the more unusual words and phrases, and the reproduction of the general scope of the lesson.”—
MR. STEELE.

“For the cultivation of the feelings, and the expression of reading, nothing is so effectual as reading, learning, and reciting poetry. But this should not be didactic verse, nor verse merely written by scholarly writers without the elements of poetry in it, such as too many educated men have written, and thought they were poets. Good narrative poetry,

descriptive of incident and emotion, is what children like best, and therefore read best.

"The importance of accustoming children to put into their own words, the simpler the better, the substance of the passage read cannot be too strongly insisted on; in this way they are encouraged to think while they read."—MR. YARDE.

MR. BARRIE and MR. MACLEOD report in the same sense.

"Children must have a pattern to imitate. They can copy a written word, or sing a bar of music, after the example set by the teacher; let them hear a suitable example in reading, and they will succeed as surely as they do in penmanship or singing."—MR. WILSON.

"The most fertile cause of failure in reading, especially in the lower standards, is the not training a child to discover words for himself. In such cases where a word is not known it is simply told by the teacher, or called out from below by a fellow-scholar, and then mechanically repeated by the child; and this repetition is often omitted. An unknown word is a complete block up, at which the child stands and gazes, waiting till it is called from below or told by the teacher, which the presence of the examiner prevents from being done.

"The only effective teaching of reading is that which enables a child to conquer his own difficulties himself, puts him in possession of a power at once to attack and discover an unknown word. . . . Six words so self-discovered will give more reading power than six weeks of repetition.

"A child (in Standard I.) ought to know at sight the chief syllables in the language, and be able to recognize and know them at once . . . and to attack a new long word by syllables, not by letters, only spelling where the syllable is unknown.

"One cause of the indistinctness in reading with too great rapidity. Rapidity and fluency seem to be confounded. Another cause is the indistinct style of speaking in schools."

MR. JOLLY.

"There is a very prevalent opinion that any one can give a

reading lesson, and it is often assumed that no preparation for it is necessary. This is especially the case with girls, and the result is that many a young teacher's one great object in the lesson is to conceal her own ignorance. She has never attempted to enter into the difficulties likely to occur, she cannot without preparation frame suitable questions, or give her class clear explanations; and becoming conscious of her deficiencies, she dares not encourage the children to ask questions. Any unfortunate child of an inquiring disposition is promptly snubbed."—MR. HARRISON.

SPELLING.

"The best cure for weakness in spelling is more reading."
—MR. EDWARDS.

"Spelling is, I think, the hardest subject to teach. Teachers complain more of this than of any other part of their work."—MR. JARMAN.

"Dictation depends very much upon the reading. Where reading is intelligent, the dictation is generally very good; where there is more or less lack of intelligence, mistakes will certainly occur. Some teachers seem sadly afraid of giving out more than one, or two, or three words at a time, and divide the passage so strangely that it is no wonder the children make mistakes. In some schools, too, evidence is not wanting that fewer mistakes would be the rule, if due care were bestowed upon the subsequent examination of the exercise. If the teacher's eyes are not sharp enough, mistakes will be overlooked, and the exercise will do the children little or no good."—MR. FUSSELL.

"Good spelling is no doubt much more difficult of attainment than good results in any of the other elementary subjects, seeing that it depends in a great measure upon the child's power of observation; the word must be impressed upon the eye rather than upon the ear, and this can best be

done by both reading and writing much. In the lower Standards transcribing from the reading-books will be found one of the best means of familiarizing the scholar with the forms of words. Attention should be directed during the reading lesson, to all words exhibiting any peculiarity of form, and these should also be written out on the blackboard. The dictation lesson ought to be regarded rather as a means of testing than of teaching spelling; still its utility is not to be despised, provided it is preceded by careful preparation of the piece to be written, and followed by thorough correction of all mistakes. In spite of all that has been written to the contrary, the old practice of making children commit lists of words to memory, was, I venture to think, in many respects a good one as far as it went, and one that is now too much despised and neglected; the spelling-book might still do good service as furnishing suitable material for home lessons."—
MR. VERTUE.

CHAPTER III.

WRITING. (STANDARD I.)

THE character of the Writing in a school is generally an index of the presence or absence of neatness, precision, and order. This is especially the case with the copy-books.

Writing is the easiest of all school subjects to learn and teach; but, as a rule, the least taught. Even the dullest child may be taught to write well, as it is mostly a question of imitation, if the subject be at all properly taught; but a good foundation must be laid at a very early date; and carelessness or untidiness must be rigorously excluded at this and at later stages.

Very frequently children come up from the Infant School writing large, bold, well-shaped letters and words; and from too much practice with slate-writing for spelling purposes, the writing becomes worse month by month in Standard I. The "scribbling" habit thus formed becomes exceedingly difficult to eradicate afterwards.

In writing the ear is no longer appealed to as in reading; but the eye and "muscular sense" of the fingers are depended on.

It is assumed here that the elements have been properly taught in the Infant School; but constant reference must be made to them throughout the year's work. The reader

is, therefore, urgently advised to study the "Remarks on Writing" in Part I.

Every writing lesson in Standard I. should be accompanied by frequent use of the blackboard.

The slates should be ruled all to one pattern, and that as large as half-text; the pencils should be sharp and long. Nothing should be allowed to be rubbed out for correction.

The *requirements for good writing* generally are the following:—

(1) *Fluency*.—That is, the writing should have sweep and breadth, rounded curves, full, flowing, and bold. This is specially to be attended to in Girls' Schools, and by female teachers, who generally make letters too flat-backed and straight. The latter fault makes the writing cramped, too much being crammed into a line.

(2) *Legibility*.—This is secured by bold round curves, referred to in (1), the *n*, *m*, *u*, and *i* not being angular or pointed.

(3) *Freedom and Rapidity*.—As a rule, children in Standard I. (and throughout school life), write too quickly, and hence write ill; but the opposite fault of slow, over-laboured writing must be avoided, as writing is a practical, and not merely an ornamental, art.

(4) *Well-shaped and Regular*.—This requirement is partly comprehended in (1), but in addition—

(a) The *Junctions*, or joining of the letters together, should be neatly and uniformly effected.

(b) The *Slope* should be uniform, and not very great.

(c) The *Thickness* should be uniform in the straight lines of *h*, *k*, *p*, and gradually increasing and diminishing towards, and from, the middle of the curves of *a*, *c*, *e*, and *f*, and parts of *h*, *k*, *m*, *n*, *o*, *p*, *q*, *s*, *v*, *x*, and *y*.

- (d) The conventional *heights* and *depths* of *b, d, f, g, h, j, k, l, p, q, t, y*, and *z*, are given in the "Writing Syllabus," Part I.

WRITING DRILL.—(1) The slates should always be flat on the desk, with the tops parallel with the length of the desk, very *slightly* to the right of the child. If the slate be too far to the right, with the child's left side touching the desk, the spine of the child will be twisted.

(2) The pencil should be held lightly between the thumb and two forefingers, about an inch from the bottom, and should be pointed from the writer. The children should not be allowed to write with their own pencils, or these will become too short and blunt. The pencils should be kept in a box in school, and given out and collected by the box being passed round the class, or passed down to the ends of the class and collected.

(3) The head should never be allowed to rest on the left arm, but the slate should be kept in position by the left hand held flat on the bottom left corner, the arm *not* being bent round the slate.

(4) Common mistakes should be corrected on the blackboard, when the copy is given on the blackboard; a second should be provided for correcting purposes, or a portion of the one board reserved for this purpose. The corrections should be referred to the proper forms of the elements of the letters.

The teacher's *own* writing should be carefully attended to, and for this purpose the Head Teacher should instruct the assistant in blackboard writing—which after all is distinct from writing on paper or slates. Of course the writing should be done in *desks*, never in galleries without desks, or on the floor. Otherwise the slate will be pressed diagonally into the child's chest, with no support to the arm, and uniformity of slope can never be thus attained.

The time-table should be so arranged that the desks can

be used for *all* the writing lessons; while the children can be taught reading out of them. Time spent in these "changes" is not lost time.

If the writing be taught systematically, it will form other useful habits of mind and body, such as—

(1) Training the eye to recognize and measure Distance, Shape, and Size.

(2) Training the hand to unite all these, and acquire manipulative skill for Drawing and industrial arts in later life.

(3) It strengthens habits of Patience, Perseverance, Neatness, and Accuracy.

COPY-BOOKS.—These are wholly in large and half-text for Standard I. [Large hand should occasionally be used in *all* the standards.]

"It is the large hand that gives the real grasp of the pen, makes the wrist and fingers supple, and enables the hand to follow with power and freedom the dictates of the brain and eye."—*Fearon on Inspection*.

Let us suppose we have begun with a set of copy-books. Here we shall have first straight strokes; these will be very difficult for the child to write, though they look so easy to the teacher; and attention will have to be called to—

(1) *The Slope*.—This should be uniform throughout the whole page, throughout the copy-book, and throughout the series. To secure this slope the child should

(a) Have his book very slightly to his right, and the top parallel with the desk.

(b) Have his pen pointed from him.

If the book be too near him, as it is sure to become from time to time unless the teacher constantly prevents this, the writing becomes vertical, and even sloped in the wrong direction, or from left to right.

There is nothing we more frequently observe in examin-

ing schools than this *bad sloping*. Its presence can be anticipated immediately on entering the school, for the writing children will not be with their faces all pointed one way, leaving parallel passages diagonally across the class, but will be all in confusion except so far as they are confined to desks.

(2) *The Height and Depth*.—The books are of course ruled, but it is some time before the children acquire sufficient “muscular sense” to be able to begin and leave off at the right places, viz. on the line. Of course the mistakes made are four—

- (a) Beginning above;
- (b) Short of;
- (c) Ending short of; and
- (d) Below the line.

When the child advances to later stages this question of height and depth in letters of more than “one spacing” becomes more complicated, as some letters such as *l* are carried higher than others such as *t*,—all in an arbitrary manner. Again, different sets of copy-books give different heights and depths for these letters, but the neatest and plainest style is that which uses short loops and straight lines.

(3) The lines themselves should be square at the top and bottom, and of equal thickness throughout, without ragged edges. In fact, these lines to be perfect want the requirements of a perfect line in drawing—they should be clean cut in outline. When the child comes to curves, those in pot-hooks gradually thicken towards the middle. A common trick in writing among boys is to make the middle of these curves *suddenly* thick; the child has a fancy that this looks pretty, whereas it is grotesque, and should be rigidly checked. In hangers the line is slightly thicker at the bottom than elsewhere, and even with the line.

The spacing out of the parts of the letters, the distances, for instance, of the separate parts of *m*, should be uniform. The great tendency in all female teachers is to make their *spaces too small* and consequently to make the *curves too flat*. This generally distinguishes girls' writing from that of boys; the latter, as a rule, write in a rounder manner with freer curves. There is something of this among boys, which has the effect of bringing twice as many words in a line as there ought to be; this is often brought about by unconsciously making the writing *smaller* and *smaller*. The teacher should always be on the look out for this tendency, and have a *standard of size* as well as of form for the class.

(4) The *Junctions*, or neat joining of letters with those next, without taking the pen off the paper, except in the case of the letter *x* and a few others, should be taught from the commencement, as it has to be carried out in practice in daily life. In the large or text hand, with which the child first begins to learn to write, the elements will be made to spring from the middle of the preceding part, and to join any succeeding factor at the same point; this will be done by lifting the pen up the line of the preceding factor to this point, as in making the letter *m*.

All through copy writing the great besetting sin of the child is to copy his *own writing*, not the teacher's, and thus to go on deepening his own shadowy, ragged, visual impressions. Every device that can be suggested to check this is as valuable as a specific against copying in Arithmetic.

At the earliest stages this can be done by not allowing the children to write the copy set on the board more than once, when a fresh copy should be given. With a quick teacher who can rapidly examine work done, this is the best way to teach writing well.

METHODS OF TEACHING TO WRITE.

Mulhäuser's Method.

This has been explained in Part I. ; but its principles must be remembered by the teacher in all stages of teaching Writing.

Mulhäuser's Method consists of—

- | | |
|--------------------------|-------------------|
| 1. <i>Analysis</i> | } by the teacher. |
| 2. <i>Classification</i> | |
| 3. <i>Synthesis</i> | by the child. |

By *Analysis* the teacher divides letters into their elements.

By *Classification* he groups letters of similar formation, and points out likenesses and differences.

By *Synthesis* the child combines the elements into letters and words.

There are *four* elementary characters, and from these all the letters of the alphabet are constructed.

(1) The *right* (or straight) line, up and down, thin and thick, as in *h, k, p*.

(2) The *curved* line, from right to left, and left to right, like the brackets of a parenthesis as in *a, c, e*, etc.

(3) The *loop*, up and down, as in *j* and *f*.

(4) The *crotchet*, as in the *r*, etc.

In any other method of teaching to write these same principles are incorporated.

MODEL LESSON ON WRITING (STANDARD I.).

[Time, half an hour. Writing on Slates.]

I. WRITING DRILL.—See that all the class sit at the desks in proper position, only slightly turned to the right, with slates all on the desk, top side parallel to the edge of the desk.

II. WRITING COPY.—Let the copy be such a combination of letters that the children cannot carry the whole in the eye, and so copy their own writing ; *e.g. rmognp.*

Write one letter at a time, calling attention to the *elements* (stroke, turn, loop, etc.), and to the *junctions, height, depth, spacing, up and down strokes*, etc. Split up *r* into its component elements, and write these separately on a second blackboard, or beneath the copy. Let a child come out and write on the blackboard beneath the word a copy of it between horizontal lines.

III. CORRECTION.—The teacher then goes in and among the class to make individual corrections, referring to the following heads :—

- (1) *Holding the pencil.*
- (2) *Position of slate.*
- (3) *Position of body.*
- (4) *Too short pencils.*
- (5) *No transgressing top and bottom lines except with certain letters.*
- (6) *No thick upstrokes.*
- (7) *No faulty shapes.*
- (8) *No imperfect junctions.*
- (9) *No irregular spacings.*
- (10) *Proper height and depth.*
- (11) *No flat-backed curves.*
- (12) *No cramped writing.*
- (13) *No copying the child's own writing.*

The errors must not only be pointed out individually, but *corrected* by the teacher and pupil. It is a good plan to let the child stand as it finishes the word, holding up its slate ; this limits the number claiming attention at one time.

SUMMARY OF TEACHING TO WRITE (STANDARD I.).

- (1) Let the writing of the teacher be bold, round, and non-ornamental.
- (2) Avoid angular writing.
- (3) Let the writing be nearly upright, rather than too sloping.
- (4) Aim at uniformity in *height, width, thickness, depth, slope, and spacing.*
- (5) Take care of the *junctions.*
- (6) Never let the class begin to write without Writing Drill.
- (7) Let the children be occasionally practised in writing complete words, without taking the pencil off the slate.
- (8) Never let anything once written be *erased.* If words are misspelt let the corrections be written over the mistakes.
- (9) Let the copy on the board be written within lines.
- (10) Do not let the writing become smaller than half-text.
- (11) Let all the slates be ruled to one pattern.
- (12) Insist on neatness (absence of blots and "smudges").
- (13) Let the children have sufficient room in the desks.
- (14) Insist on the pen or pencil being properly held, and prepare for the tendency of the child to point the pencil and pen to the left instead of to the right.
- (15) Throw away all short pencils (or better still, put them into pencil-holders).
- (16) Let the teacher write her very *best* on the board.
- (17) Do not allow much writing to be done at a time.
- (18) Turn the writing upside down ; if it is well written it will appear symmetrical in this position.
- (19) Let the teacher accustom herself to examine the slates from the *front* as well as from behind the children—practice will soon make one as easy as the other.

(20) Correct the errors on paper with black or blue pencil not with pen and ink.

(21) Never allow more than one line of transcription to be written without examining.

DIFFICULTIES TO BE ANTICIPATED AND MET.

(1) The *crotchet* on the right of the *r*, is generally ill-shaped, because it is not often taught from the blackboard as a separate element. It properly consists of a convex curve made with the up stroke, and a concave turn with the down stroke.

(2) The *o*, *a*, *g*, *d*, and other letters made up of *o* in combination with another element, are not begun with an up stroke in the middle of the right-hand curve of the letter, as they should be, but like *u* with a down stroke, while a kind of *lid* is stuck on afterwards.

(3) The stems of the *d*, *h*, etc., are not level with line above.

(4) The loops are not all of the same width, height, and depth.

(5) The writing is not all on, or within, the lines.

(6) The curves are apt to become too flat, and the writing in consequence too cramped.

(7) The down strokes are foggy, cloudy, not of uniform thickness, or gradually swelling.

PRACTICAL HINTS FROM REPORTS OF H.M.'S INSPECTORS ON WRITING (STANDARD I.).

"When children under seven have learnt to form their letters properly, there is little difficulty about the handwriting of Standard I. (and II.). False economy or inattention to the minutiae of school-keeping have much to do with

faulty handwriting. Slates badly ruled, or ruled without reference to the class which is to use them, pointless fragments of slate pencil might and should always be avoided."—MR. BALMER.

"The character of the child's writing depends on the teacher; where the teacher writes a good hand, so also does the child; and vice versa."—MR. BOYLE.

"Good writers abound in schools where careful copies on the blackboard, or in well graduated copy-books, are regularly used, and where the teacher writes well himself, and gives careful instructions in the formation and proportions of the various letters, and attends to uniformity, legibility, and boldness of style."—MR. CROFTS.

"The writing classes are left too much to themselves, or to the crude instructions of a pupil teacher, and posture is not sufficiently insisted on."—MR. CODD.

"Children who have been allowed to write on slates alone can hardly be expected to take to writing on paper as readily as those who began at a much earlier period. When copy-books come into general use in Standard I. there will be much less room for complaint as regards the handwriting. A suitable course of oral teaching, combined with a judicious use of the blackboard, should always occupy a prominent place in the writing lesson, and a correct method of holding the pen should be more strongly insisted on."—MR. VERTUE.

"A good attitude, and a right method of holding the pen will always be indispensable: tidiness, symmetry, boldness and roundness of outline are equally important."—MR. WARBURTON.

"The remedy for bad writing is to be found in the constant use of the blackboard in teaching writing, a thorough drill in the few elementary lines and loops and crooks that make up our written alphabet, in showing exactly where the turn begins, how far up or how far down the line must go, and where and how the joinings are to be made. In too many

instances the pupil is left to the freedom of his own will, and develops a style of his own, which is never a good one."—

MR. WALKER.

"Letters should be dissected, and their formation pointed out on the blackboard, as regularly and carefully as Arithmetic or any other subject is taught."—MR. JOLLY.

"By far too much time is daily devoted in many schools to writing on slates, long after they ought to be writing on paper."—MR. WILLIAMS.

CHAPTER IV.

ARITHMETIC (STANDARD I.).

It is a golden maxim in teaching Arithmetic that the teacher should never begin with enunciating a rule, but with a problem to be worked mentally. The writer thinks that this should be observed even with Standard I. That is, easy problems should be given in Simple Addition, and as these become harder they should be worked on slates, until the Government limit of 999 is reached. It is assumed that the children have abandoned, in the Infant School, the vile unitary method of addition (4 and 1 are 5, 5 and 1 are 6, etc.) ; and have been taught to add together such numbers as 4 and 5 directly, and *without counting on the fingers*.

In the first stages the numbers given out should be regarded by the children as wholes ; and the analysis into units, tens, and hundreds, should only be commenced at a later date. The child knows of 20 as a whole ; not as of two tens, and no units. There is no subject that will promote the *intelligence* of the school more than Arithmetic, if it is taught continuously and from the earliest stages, through *concrete problems* ; there is none so utterly deadening to the intellect as mechanical abstract Arithmetic. Nearly one-half of the Arithmetic in Standard I. should be Mental ; and wherever this is the case, the slate

and paper Arithmetic are accurately done. Moreover, the teacher should reflect that most of the actual Arithmetic of the working man's life is *mental*.

A child should never be set to perform two mental operations at the same time, if it can be avoided. Before using slates, therefore, the class should have acquired facility in performing the processes of Addition of several figures; of Subtraction; and of Multiplication up to 6 times 12.

Arithmetic trains the reasoning powers; unconsciously to the child it furnishes him with the Laws of Mind, and trains him to be accurate, persevering, and patient to work towards an unseen, but hoped-for, end. Working problems also strengthens the inventive faculty, and assists the imagination.

In Addition encourage the children to add the figures in groups: thus 4, 5, 4, 5, 6 should be mentally grasped as two fours = 8, two fives = 10, 8 and 10 = 18, 18 and 6 = 24; instead of 4 and 5 are 9; 9 and 4 are 13; 13 and 5 are 18; 18 and 6 are 24. Again, instead of allowing the child to count 4 and 5 are 9, 9 and 4 are 13, etc., let him acquire the habit of saying to himself the *result* only, as (taking 4 and 5 together) 9 (taking 9 and 4 together), 13, and so on to the end.

MODEL LESSON IN ARITHMETIC (NEW RULE).

(1) Commence with a few concrete exercises in Mental Arithmetic, leading up to the rule to be introduced.

(2) Work out on the blackboard similar exercises, but rather harder than the preceding.

(3) From this working show the necessity and processes of the new rule to be learnt.

(4) Illustrate the rule by copious exercises given to the children to work out on the blackboard with the teacher.

(5) Give similar exercises for slate practice by the class.

N.B.—Be careful to break up the work into *Stages* logically depending on each other, and proceeding from the simple to the more complex. In many instances *one* stage only can be taught in a lesson. When a succeeding stage is attacked, connect the lesson with the preceding.

(6) While the quicker children are doing additional exercises, call out the duller ones, and repeat the explanatory processes on the blackboard to these.

(7) To keep up the Notation, dictate the numbers; and to keep up the Numeration, let the children read their answers.

(8) In Subtraction let the children “*prove*” their answers.

SIMPLE ADDITION: ON SLATES (ALL IN PROBLEMS).

First Stage.—Adding up numbers when the total amounts to less than 10, as—

1	1	2	2	5	6
1	2	2	3	4	3
—	—	—	—	—	—
2	3	4	5	9	9

etc., up to etc.

The same with three lines.

[Subtraction should be taken with the Addition, within the same limits, and without borrowing, as—

4	5
2	2
—	—
2	3

etc.]

Second Stage.—Up to the limit of 19 in the total; in two and three lines, as $6 + 4 = 10$; $3 + 4 + 5 = 12$, etc.

Third Stage.—To the limit of 99 in the total.

“Carrying” is here introduced.

Fourth Stage.—To the limit of 999 in any one line.

These stages are carried on by means of Notation and Numeration, the 0 being more and more frequently introduced as the class advances.

Fifth Stage.—Analysis of numbers into units, tens, and hundreds, according to the headings herewith appended—

H.	T.	U.

Sixth Stage.—The same with H. T. U. on the top of the columns, without lines.

As some of the children will work their addition exercises more rapidly than others, it is useful for the teacher to have a means of telling at sight the answers to additional sums given individually to the quicker children.

For this purpose let any line, say 342, be taken; 342
 add a second line, which will convert this into 000 658
 with 1 before it, viz. 658. This couple will there- 27
 fore make 1000; do the same with another couple, 973
 say 27 and 973; the four lines now make up 2000. 216
 Add a *proof* line, say 216, and the answer will be 2216
 found at sight, 2216; or *two* proof lines may be 2216
 added at sight, provided there is no carrying, as
 212 and 312. Then the answer will be 2524 told at sight.

SIMPLE SUBTRACTION.

First Stage.—Mental exercises in subtracting numbers not greater than 20; as 6 from 12, 7 from 11, 9 from 20, etc.

Second Stage.—Here there is to be no borrowing, as—

679	482
321	61
—	—
358	421

Third Stage.—The same with H. T. U. affixed, as—

H. T. U.				
3	4	5	1 unit	from 5 units = 4 units
2	3	1	3 tens	„ 4 tens = 1 ten
—			2 hundreds	„ 3 hundreds = 1 hundred
1	1	4		

Answer: 1 hundred, 1 ten, 4 units = 114.

Fourth Stage.—First Method: by equal additions.

Explanation.—If one boy has 7 marbles, and another 4, the difference will be 3; if we give each one marble, the one has 8 and the other 5, and the difference is still 3; and so on if we give each 2, 3, 4, 5, 6, 7, 8, 9, 10, etc.

We may therefore add any number to the top line without altering the difference, if we add the same number to the bottom line. We agree always to add 10, if we add at all. But we only add to the top line if it is less than the bottom; thus in 6 from 5, we find we cannot get on. But if we add 10 to the 5 this becomes 15; then we can take away 6, and there is 9 left. But we have not yet added 10 to the bottom line. But we will do so. This might be done by calling the 6, sixteen, or we can add 1 to the 2, and call that 3, as the 2 is two tens, and the 3 will mean three tens, or one ten more than before. Having thus added 1 to the 2, this becomes 3, and 3 from 4 leaves 1. So the answer is 19.

Plenty of exercises should be given in which only one addition thus takes place, before we repeat the process; so that the children may become accustomed to one of the most difficult feats in Arithmetic.

Second Method: by Decomposition. Take the same example as before—

$$\begin{array}{r} 45 \\ 26 \\ \hline 19 \end{array}$$

The 45 is 4 tens and 5 units; or 3 tens, and 1 ten, and 5 units. The 1 ten and 5 units are 15 units; now take away the 6 units, and there are 9 units left. In the next column as it stands, we have to take 2 tens from 4 tens; but one of those 4 tens is already disposed of; so there are but 3 tens left; and 2 tens from 3 tens leaves 1 ten. The answer is, therefore, 1 ten, 9 units, or 19, as before.

Of course only *one* of these methods should be taught; the teacher should make up her mind previously as to which she will adopt, and adhere to it.

Third Method: subtracting from Ten.

Using the same example as before $45 - 26$, let the six be taken from the borrowed ten, before adding on the 5; thus 6 from 10 leaves 4, and 4 and 5 are 9; 3 from 4 leaves 1 as before.

This method is very useful at a later stage, in *Compound Subtraction*; thus, in 13s. from 12s. take 13s. from 20, this leaves 7, and 7 and 12 are 19, and similarly with the borrowed 1d. (4 farthings) and 1s. (12 pence.)

SIMPLE MULTIPLICATION TO $6 \times 12 = 72$.

First Stage.—Nearly all these exercises should be *concrete*; as 4 rows of panes, and 6 in a row = 24, etc.

Second Stage.—In this the multiplier should be no larger than 6, and there should be *no carrying*, as

$$\begin{array}{r} 2 \\ 426 \end{array}$$

Third Stage.—Same as 2, *with carrying*.

$$\begin{array}{r} 246 \\ 3 \\ \hline 738 \end{array}$$

The children should also be exercised in writing out, and repeating, the Multiplication Table (see Part I.).

As a matter of fact the children in Standard I. readily learn to do simple Mental Division; as, Share 12 marbles among 3 boys:—answer, 4 marbles to each. If this is done the children readily see that Multiplication and Division are the opposites of each other; thus $4 \times 5 = 20$. Fours in 20, 5; and Fives in 20, 4.

In the Mental Arithmetic of Standard I., the Arithmetic of 2s. is readily taught, and much enjoyed; as, How many shillings, sixpences, fourpenny, threepenny pieces, pence, half-pence, in 1s. and 2s.?

What part of 2s. is 1s. 6d.? This introduces the meaning of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{3}$, etc., and, after a little practice, Standard I. children readily grasp the meaning of these fractions. The same remarks apply to the Arithmetic of a yard, and of a foot.

Finally, very interesting questions are made out of “shopping,” spending a 1s. and 2s.; as, A man had 1s. in his pocket, and bought 2 cakes worth 3d. each: how much had he left?

It will be sufficient for the writer merely to indicate the lines along which the young teacher should travel, but the latter should prepare before the lesson sufficient typical examples to interest and instruct the class.

As the teacher will experience the most difficulty in preparing exercises in Mental Arithmetic for Standard I., typical kinds are appended below:—

MENTAL ARITHMETIC (STANDARD I.).

Notation and Numeration.

I. What figures must be used to write the following?

Seven hundred and seven.

A hundred and eleven.

One hundred and ten.

Nine hundred and ninety.

A hundred and thirteen.
 Seven hundred and seven.
 Two hundred and two.
 Two hundred and twenty.
 One hundred and one.
 Five hundred and ten.
 Ten hundred.
 Seventy tens.

II. Say in words how the following numbers are written:—

111 713 110 303 1000 330 770 907

III. What is the tens figure in

Six hundred and twenty-four,
 Three hundred and sixty,
 One hundred and ten,
 Three hundred and eleven,
 Six hundred and six,
 Thirty-three,
 Nine,
 One hundred and eleven ?

Addition.

IV. 6 + 4 + 3 + 2	15 + 7 + 8 + 6
7 + 4 + 6 + 3	19 + 20 + 11 + 3
6 + 9 + 3 + 7	18 + 18 + 3 + 7
6 + 0 + 7 + 0	40 + 50 + 60 + 70
8 + 0 + 9 + 7	30 + 17 + 4 + 5
12 + 3 + 7 + 4	40 + 27 + 9 + 8
13 + 7 + 8 + 9	36 + 11 + 3 + 9
14 + 8 + 12 + 3	13 + 17 + 20 + 30

V. Give the sum of

Two + three + four.
 Three + four + five.
 Six + seven + eight.

Seven + sixteen + nine.
 Eight + nine + seven.
 Nine + seven + twelve.

Eight + nine + ten.	Thirteen + seven + six.
Ten + eleven + twelve.	Eight + nine + twenty.
Eleven + nine + twelve.	Three eights.
Thirteen + ten + eleven.	Four sevens.
Four + twelve + ten.	Five twelves.
Five + thirteen + seven.	Four twenties.
Eight + eight + seven.	Five twenties.

VII. Give in words, without writing on slates, the sum of the following :—

614	367	90	379	60
37	97	860	14	709
907	106	79	9	99
—	—	—	—	—

607	685	107	847	607
90	907	9	91	98
709	69	900	867	709
19	107	90	97	814
—	—	—	—	—

168 + 714 + 798	607 + 91 + 8
370 + 907 + 81	81 + 90 + 989

VII. How many fingers have you on one hand?

How many on both hands?

How many fingers have three boys?

How many toes and fingers have you?

"	"	"	"	two boys?
"	"	"	"	three boys?
"	"	"	"	two one-legged men?

How many legs have three boys and four horses?

How many eyes in a class of seventeen boys?

How many eyes and ears in a class of twelve boys?

"	"	"	"	twenty-nine boys?
---	---	---	---	-------------------

How many legs have three cows, two horses, and three men?

If 0 stands for nothing, how can 2 and 0 be twenty?

What do three twos, standing side by side, stand for?

VIII. In adding up odd numbers of figures that run in order, take the middle one and multiply it by the number of figures given. Thus in 2, 3, 4, the middle figure is 3, and $2 + 3 + 4$ is $3 \times 3 = 9$.

What is the sum of

2, 3, 4	3, 4, 5	4, 5, 6	5, 6, 7
6, 7, 8	7, 8, 9	8, 9, 10	9, 10, 11
10, 11, 12	11, 12, 13	12, 13, 14	15, 16, 17
16, 17, 18	17, 18, 19	18, 19, 20	19, 20, 21

IX. In the same way find the sum of

2, 3, 4, 5, 6	3, 4, 5, 6, 7	4, 5, 6, 7, 8
5, 6, 7, 8, 9	6, 7, 8, 9, 10	7, 8, 9, 10, 11
8, 9, 10, 11, 12	9, 10, 11, 12, 13	2, 4, 6, 8, 10

X. How many times does the clock strike from one to three o'clock?

How many times does the clock strike from one to five o'clock?

How many times does the clock strike from one to seven o'clock?

How many times does the clock strike from one to nine o'clock?

How many times does the clock strike from one to eleven o'clock?

How many times does the clock strike from one to twelve o'clock?

XI. A man owes 17 shillings and 6 shillings and 5 shillings: how much does he owe altogether?

A man bought a cow for £24, a horse for £36, and a pig for £7: how much must he pay?

John had 37 marbles; he bought 17 more, and won 9 :
how many has he now ?

Two men caught 29 sprats each : how many did they
both catch ?

Three men won £8 each : how much did they win in all ?

Subtraction. XII.

From	19	15	24	36	27	39	42
Take	12	6	13	15	14	21	31
	—	—	—	—	—	—	—
	64	42	35	61	54	26	82
	31	39	32	29	27	19	37
	—	—	—	—	—	—	—
	607	601	361	609	107	816	900
	181	97	72	98	99	90	85
	—	—	—	—	—	—	—

XIII. Give the answers at sight to the following :—

37 — 19	96 — 27
41 — 27	27 — 19
901 — 857	607 — 99
851 — 407	691 — 397

XIV. What is the difference between—

Thirty-one and seventeen,
Forty-two and twenty-nine,
Eighty-three and thirty-six,
Fifty-one and twenty-eight,
Forty-three and nineteen,
Eighty-three and thirty-six,
Ninety-eight and fifty-nine,
Seventy-three and forty-six,
Fifty-two and nineteen,

Sixty-eight and seventeen,
 Ninety-four and seventy-six,
 Ninety-nine and seventy-one ?

XV. Which is the greater, and by how much ?

Nine hundred and six or seven hundred and two.

Seven hundred and five or ninety-nine.

Sixty-seven or three hundred and sixty-eight.

40 or 796.

Three hundred and ten or twice 310.

Seven hundred and nine or six hundred and eight.

Addition and Subtraction.

XVI. *Test Exercise.* (Time, 5 minutes.)

$$\begin{array}{rcl}
 7 + 9 + 17 + 11 - 9 + 5 & = & \\
 13 + 17 - 20 + 13 & = & \\
 31 + 71 + 20 + 19 - 20 & = & \\
 20 + 19 - 21 + 59 & = & \\
 68 + 17 - 100 + 50 & = & \\
 79 - 36 + 17 + 24 & = & \\
 40 + 79 - 31 + 11 & = & \\
 36 + 111 + 7 - 29 & = & \\
 36 + 16 + 36 - 16 & = & \\
 70 - 20 + 40 - 50 & = &
 \end{array}$$

XVII. There were 91 boys in school; 17 were late: how many were early ?

A man had 19 shillings; he lost 7 and earned 12 more: how many had he at last ?

A loaf cost 13d., butter 17d.: how much change will there be out of half a crown (30d.) ?

John had 21 marbles; he lost 17 and won 34: how many had he at last ?

17, add 24, subtract 12, add 17: how many at last ?

34, add 9, add 6, take away 14: how many left ?

$$10 + 21 + 18 - 36 =$$

Which is the greater, 50 or 80? and what will the difference be?

31 plus 97 minus 6.

41 minus 6 + three hundred.

$60 - 40 + 37 - 27 =$

Multiplication. XVIII.

3×11	5×10	4×11	5×12
6×10	6×10	4×12	6×12
5×14	5×11	4×13	3×9

XIX.	$0 \times 0 =$	$0 \times 1 =$
	$6 \times 0 =$	$1 \times 0 =$

How many pence in 2, 3, 4, 5, 6 shillings?

How many shillings in 2, 3, 4, 5, 6 pounds?

XX. How many farthings in 2, 3, 4, 5, 6 pence?

„ „ „ „ 1 shilling?

XXI. How many apples can be bought for 6*d.* at a halfpenny each?

What will 9 ozs. of tea cost, at 4*d.* an ounce?

If a boy walks 11 miles in a day, how far does he walk in 6 days?

What will 11 pairs of shoes cost at 5*d.* a pair?

What will 6 pecks of plums cost at 8*d.* a peck?

What will 6 men earn if 1 earns 11 shillings?

What does a man earn in a week at 4*s.* a day?

What will a glove cost at 5*d.* a finger?

MENTAL ARITHMETIC SCHEME.

The following mental arithmetic scheme has been worked in a Boys' School with great success:—

STANDARD I.—Ideas of number, length, and time, to form basis for first principles in Geography.

- I. Adding by sight, at first using visible objects as concrete representatives, small numbers to be increased gradually.
- II. Association and application of numbers up to 12.
Use a foot ruler and draw diagrams on the board.
- III. Forms and angles, triangle, square, divided into inches, adding and subtracting these.
- IV. The number 12 divided into $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{7}{8}$, $1\frac{1}{2}$, etc.
Fractions also into 2nd, 3rd, 4th equal parts.
- V. Uniting of number and value. 1s. divided into two 6d., into three 4d., into four 3d., pieces, etc.
(1s. = 2×6 , 3×4 , 4×3 , 12×1 , $8 \times 1\frac{1}{2}$, $24 \times \frac{1}{2}$, $48 \times \frac{1}{4}$.)
Problems in addition and subtraction arising out of the above. Reduction and exchange of money.
- VI. Make the children familiar with the following coins :—1s., 6d., 4d., 3d., 1d., $\frac{1}{2}$ d., $\frac{1}{4}$ d., florin, and half-crown.

APPLICATION AND EXTENSION OF THE ABOVE.

- (1) (a) 2s. = 96 farthings.
- (b) 1 yard = 3 feet or 36 inches, 72 half inches; $\frac{1}{2}$ yard = 18 inches; $\frac{1}{4}$ yard = 9 inches; $\frac{1}{3}$ of a yard = 12 inches; $\frac{2}{3}$ of a yard = 24 inches.
- (c) The number 24 to be broken up thus :—(12, 12); (6, 6, 6, 6,); (8, 8, 8,), etc., etc.
- (d) Do the same with 36.

Application of the above to greater numbers and length. Plans of class-room, yard, school; scale introduced, cupboards, boards, desks, pointers, or any objects with which they are familiar to be measured by sight.

(e) *Shape*. Oblong, square, triangle, circles, round, semicircle, etc.

Dexterity, quickness, and accuracy are to be aimed at.

Absolute silence to be strictly kept.

No movement of fingers or any part of the body.

N.B.—The meaning of plus and minus should be thoroughly understood by the children.

SUMMARY OF TEACHING ARITHMETIC (STANDARD I.).

- (1) Begin each lesson with Mental Arithmetic.
- (2) Let these problems lead up to the particular subject in hand.
- (3) Suit these, and the work following, to the individual capacities of the children.
- (4) Construct the problems so as to awaken intelligence.
- (5) Choose numbers that will keep up the Notation and Numeration.
- (6) Be on the alert for copying.
- (7) Never let an individual be doing nothing.
- (8) Never let a child be doing that which requires no mental effort.
- (9) Do not give a child work he cannot do after he has tried his best.

DIFFICULTIES TO BE ANTICIPATED AND MET.

The great difficulty in teaching Arithmetic is to prevent *copying*. To this end the following plans should be used:—

(1) Divide the class by even and odd numbers; one, two; one, two, etc.; or A, B; A, B, etc. Give out two sums, one for each alternate child.

(2) Give out a common sum, say of four lines; number the children as 2, 3, 4. Whilst the 4 lines of the sum are common to all, number 2 makes a fifth line by repeating the second line; number 3 repeats the third line; and

number 4 the fourth line. The teacher previously works out the three answers (Nos. 2, 3, 4), and examines.

(3) Let the children work back to back, or one-half looking one way, and the other alternate half the other.

PRACTICAL HINTS ON TEACHING ARITHMETIC FROM REPORTS
OF H.M.'S INSPECTORS (STANDARD I.).

"I must still complain of children being allowed to subtract (and multiply) without having been taught the principle involved in these exercises, and of their being easily caught by the trap in the case of subtraction of placing the smaller number first in your question."—MR. TREGARTHEN.

"The good of working sums on paper is, that it makes the child more accurate, for if a false figure be put down, it cannot be replaced by another so readily as when on slates."—MR. WILDE.

"The chief defect I find in the Arithmetic of Standard I. is the (too) great use made of the fingers in counting. . . . If the child cannot subtract 1 from 7, etc., it has not learnt the simplest relations of numbers."—MR. WILLIAMS.

"Arithmetic can be done in Standard I. efficiently and easily, and with pleasure to the children without either fingering or mere repetition. So vicious is the practice of fingering, and so dependent do the children become on its use, that I have seen many schools where the children were unable to do the exercises up to Standard VI. without the help of the fingers or marks. By this practice the children gain little more power of calculation than the adding and subtracting of units; whereas the aim of good introductory training is to give the power of operating with numbers easily and correctly by steps."—MR. JOLLY.

"At least half the time allowed to Arithmetic should be given to problems."—MR. OAKELEY.

"Children who generally write on slates readily acquire the

habit of altering a letter or figure, and, if examined on paper, can only smudge or erase whatever they find it needful to alter. Those who regularly use paper learn to be more careful in what they first set down. Their work is tidier and more accurate. In too many cases principles are not sufficiently attended to."

—MR. BALMER.

"The multiplication tables are taught without illustration, so that a child who knows them all by heart up and down, will more often than not fail to tell the number of pence in 5s. or the number of days in six weeks."—MR. EDWARDS.

"Arithmetic is still in most schools very mechanical, and the cause of this must be sought in the teaching, not in the children."

"I have asked teachers to begin and teach one of the new rules for the next year's work on the day of inspection, and in these first lessons it is easy to find one cause at least for the want of intelligence afterwards displayed in the use of the rule. A model sum, always too difficult for a beginner, is put on the blackboard; it is then worked by the teacher, and the different steps are pointed out, more or less clearly. Two or three more examples of the same kind follow, and then the children are set to work the rule for themselves. But of any use of Mental Arithmetic in leading up to the rule, or easy examples showing its application and its connection with rules previously learnt, there is rarely a trace."—MR. SYNGE.

See also Reports by MR. VERTUE, MR. WARBURTON, and MR. WILLIAMS.

CHAPTER V.

CLASS SUBJECTS—SCHEDULE II. (STANDARD I.).

“The Class Subjects should be taught by means of reading-books and oral lessons, illustrated, so far as possible, by maps, diagrams, specimens, and simple experiments.” (Art. 109, New Code, 1883.)

I. ENGLISH. *“To repeat twenty lines of simple verse.”*

II. GEOGRAPHY. *“To explain a plan of the school and play-ground; the four cardinal points; the meaning and use of a map.”*

III. ELEMENTARY SCIENCE. *“Common objects, such as familiar animals, plants, and substances, employed in ordinary life. A progressive course of simple lessons on the above topics, adapted to cultivate habits of exact observation, statement, and reasoning.”*

“As a rule, the examination in Geography and Elementary Science will follow the courses indicated in the Schedule. But if the managers desire, they may submit to the Inspector at his annual visit, and the Inspector may approve for the ensuing year, some similar progressive scheme of lessons in these subjects. In Elementary Science this scheme may be framed so as to lead the scholars in Standard I.-IV. up to one of the scientific specific subjects; or the scheme given above may be taken as a guide, suggesting heads for a sufficient number of lessons in each Standard.” (Revised Code, 1883.)

"In reporting on the subjects of Grammar (English) and Geography, you will report whether a grant should be made, and if so, whether the results of the instruction are "fair," or "good." The mode of examining is left to your discretion, and may be usefully varied from year to year. It is often advisable to invite the teacher of the class to put a few questions, in order that you may know what plan he has applied, before proceeding to propose questions of your own.

ENGLISH.—*"The recitation of a few verses of poetry have been prescribed in every Standard, and it will be the duty of the teacher to submit to you for approval on the day of inspection a list of the pieces chosen for the ensuing year. It is not necessary that the required number of lines should be taken from one poem."* [This can hardly apply to Standard I.—Ed.] *"They may be made up from two or more, provided that each extract learned by heart has a completeness and value of its own, and is understood in relation to the story or description of which it forms a part. The extract should be pleasing and intelligible to the children. In testing the memory lessons, it may suffice to call a few of the children—not less than one-fourth in each class—to write each a few lines in succession.*

"GEOGRAPHY AND ELEMENTARY SCIENCE.—*The Code recognizes as the means of instruction in Geography and Elementary Science, reading-books, oral lessons, and visible illustrations. But it does not prescribe the exact proportions in which these means shall be employed for each Standard and for each subject. These proportions should be determined partly by the special plans, and aptitude of the teacher, and partly by other considerations. In Standard I. (and II.) it will not be necessary for you to insist on the use of a reading-book, if provision is made for meeting the requirements of the Code by a systematic course of collective lessons, of which the heads are duly entered in the Log-book. In teaching Geography, good maps (both of the county and)*

of the parish or intermediate neighbourhood in which the school is situated, should be affixed to the walls, and the exact distances of a few near and familiar places should be known. It is useful to mark on the floor of the schoolroom the meridian line, in order that the points of the compass should be known in relation to the school itself, as well as on a map." (Instructions to Inspectors.)

RULES OF EXAMINATION ON CLASS SUBJECTS.

- "(i.) *The recognized class subjects are:—*
1. *English*; 2. *Geography*; 3. *Elementary Science*; 4. *History*; 5. *Needlework for girls and mixed schools.*
- (ii.) *For the purpose of examination in class subjects a school is considered as made up of two divisions.*
- (iii.) *The lower division must contain the scholars presented for examination in the elementary subjects with the Standards below the Fourth, and the upper division those in the Standards above the Fourth. The managers may place in either division the scholars with the Fourth Standard.*
- (iv.) *No more than TWO class subjects, one of which must always be ENGLISH, may be taken by either division. The same number of class subjects must be taken throughout the school.*
- (v.) *If two class subjects are taken, the second must be in the lower division, either Geography, or Elementary Science; in the upper division, Geography, Elementary Science, or History.*
- (vi.) *The girls in a Mixed School may take Needlework as a second class subject in either division, but*

in this case the school cannot receive the grant of 1s.

- (vii.) *If the girls in a Mixed School take Needlework and the boys another subject, the grant may be paid on the average attendance of boys and girls separately.*
- (viii.) *All scholars who are required to be presented for examination in the elementary subjects, must be presented for examination in any class subjects that are taken, unless there is a reasonable excuse for their being absent, or withheld from the examination.*
- (ix.) *The scholars examined in the class subjects are examined in the classes in which they are taught.*
- (x.) *The examination is, as a rule, oral in the lower division.*
- (xi.) *The examination of the scholars varies according to the Standards."* (Revised Code, 1883.)

ENGLISH.

This for Standard I. consists of the learning and repetition of twenty lines of simple verse.

As a rule, suitable selections for this purpose will be found in the Standard I. reading-books; and narrative pieces should be preferred. The teacher should, if possible, select a single poem of 20, 24, or 28 lines; and the children should be taught the general meaning of the whole; and the meaning of the separate words, phrases, and sentences in it. They should also know how to pick out from it the common and proper nouns in preparation for Standard II.

The poetry in general, in the reading-book, and this in particular, should be made the vehicle for teaching *Expression*.

GEOGRAPHY.

This will be found in practice to be the most educative of the subjects taught in Standard I. ; and will very usefully lead up to the Geography of Standard II. With teachers properly supervised and instructed by the Head Teacher no insuperable difficulty will be found in satisfying the requirements, so far as children properly trained in the Infant School are concerned. The difficulty will be with the wastrels brought into school without infant training, who have not yet been instructed in the "3 R's." We propose to ignore these for the present, and consider, at first, the ordinary Standard I. children.

With these, the teacher should begin with the school-room, and to make the matter simple, the first lessons should be given in the class-room when such is to be had.

The four walls of the room should be first pointed out without reference to the points of the compass. Next, the attention of the class should be called to the floor, and to the objects upon it (desks, stove, teacher's desk, chair, easel, etc.). Then the *relative* positions of these should be noted.

The next stage should consist in drawing *on the floor* the lines marked out by the walls ; these lines being drawn parallel to the actual walls of the room. Within this rectangular space, the groups of desks should be represented, in lines parallel to the desks ; their positions being correspondent to the actual sites occupied by them in the room.

Following this, the *children* should draw plans of the room, marking the four walls and groups of desks, as on the chalked plan on the floor.

The next stage would introduce into the floor-plan the remaining objects on the floor.

This might be succeeded by the same thing being done on slates.

At the next stage the door or doors might be indicated, on the floor and on slates. All this is much helped by the use of a toy kitchen and parlour, with furniture. (See Part I.)

At this point the class will have experienced the want of names to the four sides of the room. These should now be referred to the points of the compass, if the walls directly face north, south, east, and west.

A good plan to teach these points will be to call attention, at 12 o'clock, to the position of the sun in the heavens.

The children will have to be *told* here, that the sun is always in the south at mid-day to us ; and that the opposite point is the north. A line should be drawn across the room, to represent the north and south direction, and this will be the *Meridian Line*, but the hard name can be reserved from the class.

The class must next be informed that facing the south we always have the east on our left, and that the opposite side is the west, which lies, therefore, on the right.

All this will take time to familiarize to the class.

The next stage will deal with the *corners* of the room ; and it will be pointed out by the teacher that the corner that is in the north side, and also in the east side, is both north and east ; or, as we agree to call it, north-east ; and so on for the north-west, south-east, and south-west.

Another lesson should refer to the same matter, dealt with on the slates ; and a following lesson with a map placed on the floor with its top side to the north. If this has been sufficiently grasped, the map may be hung on the wall, and the matter treated after the same manner.

To enlarge the subject, the children should be taught to associate the east with the rising sun, and the west with

the setting sun ; also with shadows thrown westward and eastward respectively.

But if the room does not lie four-square to the points of the compass there will be much greater difficulty.

It will then be best to draw the plan of the room on the floor as before, with the sides still facing the north, south, east, and west ; and to accustom the children to the plan drawn askew of the real outlines of the floor.

When the planning of a *single* room has been well understood, it will not be difficult to add to the plan the adjoining rooms, play-ground, and street ; marking each with the proper points of the compass, which should, however, be limited to 8 out of the 32.

These lessons may be well illustrated by the blackboard itself as the plan, and by the slates of the children. (See plan of school, Part I.)

When the notions of the eight points of the compass referred to a rectangle are well fixed, the teacher should illustrate with the school clock and a watch, in which XII. may stand for North ; VI. for South ; III. for East ; and IX. for West. This will lead up to a compass and magnetic needle, which may be purchased in brass box and glass cover for a shilling.

In order to give first notions of the meaning of a map, copious reference should be made to pictures of landscapes, rivers, mountains, islands, capes, harbours, ships, etc. Some of these will be found in the reading-books, others may be provided by the teachers in books not used in the class, and others, again, in Geographical Picture Charts now published for this special purpose. Most of the latter are in duplicate, one half giving the picture, the other a corresponding plan or chart. Continuous exercises should be given in linking these two together, the children being asked to point out the situation on the chart of the objects figured in the picture, and *vice versâ*. When this has been

repeatedly done, the children will learn the differences between a picture and a map, and the *meaning* of the latter.

The *uses* of a map will be then pointed out in detail, viz :—

- (1) To tell the shape and size of pieces of land and water.
- (2) To mark out the relative situations and distances of objects (rivers, towns, etc.) on the map.
- (3) To enable voyagers and travellers furnished with maps and a compass to travel in unknown regions.

Very little of this mechanical part of the subject can be learned in Standard I. from a reading-book, but excellent geographical notions can be learnt by the use here of any of the interesting Standard I. geographical reading-books, which are full of suggestions to the young teacher.

The same lessons, but in less detail, should be given to the class of wastrels.

ELEMENTARY SCIENCE.

This is a Class Subject which will perhaps be rarely taken by teachers ; and one on which it would be difficult to give any instructions within the limited compass of this Manual. The writer thinks that so far as Standards I.-III. are concerned, the best course will be to work out the lessons in some good work on "Notes of Lessons" (see Major's "Notes of Lessons"), or Object Lesson Book. Thus in the former all the requirements of the Government are provided for in Parts I., II. (Animal and Vegetable Kingdoms), while Parts III., IV., V. (Metals, Minerals, and Manufactures) deal with the third requirement of the Schedule in Elementary Science, viz. "substances employed in ordinary life." A lesson on each of these subjects is appended for the use of Pupil Teachers not supplied with these "Notes of Lessons," as a Model on which to frame others.

NOTES OF LESSON ON THE COW.

Subject Matter.

- I. **APPEARANCE AND STRUCTURE** ⁽¹⁾.—This is one of the ruminants (animals that chew the cud, or masticate their food after being first swallowed and mace-rated). These have for this purpose a large *paunch*, or first stomach, into which grass passes only half chewed, to be jerked up again, during repose, into the mouth, chewed again, and passed into the second stomach, and thence into the third, and even fourth. ⁽²⁾

Head.—Generally furnished with long or short, straight, curved, or recurved horns; on a long, flexible, muscular neck, to reach the ground easily. ⁽³⁾

Tail.—Long, and tufted at end, to keep off flies from all parts of body. ⁽⁴⁾

Feet.—Cloven-hoofed, fit for grass land, foot spreading on soft soil; but not suited to hard roads.

Skin.—Thick and hairy, to keep out wet while ruminating on damp grass. ⁽⁵⁾

- II. **WHERE FOUND**.—Wherever grass grows, and man is civilized enough to be pastoral and settled. Not round the pole; and in some parts the cow is replaced by the horse in giving flesh and milk to man. Irish and Spanish lean stock are brought to England to be fattened in the Fen districts and on other rich lands.
- III. **HABITS AND CHARACTER**.—The domestic cow probably came from abroad, wild ones in other countries being domesticated ones run loose. The good *points* of a cow are wide chest; strong, straight backbone; small, short leg-bones; thick, warm,

hairy skin, feeling soft and loose; lively, mild eye, etc.

They require good water; a piece of rock salt mixed with their food; and they should be kept in the open air, or rubbing down instead of outdoor exercise should be given during winter time, when stall-fed.

IV. KINDS.—(1) *Shorthorns*.—These are mostly light-coloured or white; having short horns, turned inwards towards each other.

(2) *Long horns*.—These have long horns turned at the points from each other, as seen in the Spanish oxen.

(3) *Devonshire* cows are nearly always red, with small bones, and glossy hides; yielding milk very rich in cream.

(4) *Welsh* cows are mostly dark brown, with long white horns. They are of hardy constitution, owing to their being reared among the mountains; and will fare well on commons and road-sides, so that they are cheap in their keep, and similar in this respect to *Irish* cows.

(5) The *Alderney* cow is a good milker, and is a favourite in London dairies.

V. USES.—(1) To give *milk*. This food is particularly suited to infants and invalids, as it contains all the different substances required in the various kinds of food necessary to health, and these all ready for assimilation (digestion). From milk we obtain butter and cheese.

Butter is obtained by beating the milk in a churn, when the fatty particles of the cream run into each other, and solidify, leaving a liquid called buttermilk.

Cheese is obtained by turning the milk by rennet, into curds or a solid portion, from which the cheese is made; and into liquid whey fit for the pig.

- (2) Its *flesh* yields beef, and *veal* in the case of the calf.
- (3) Its *horns* and *hoofs* are made into glue.
- (4) Its *bones* furnish material for handles for knives, forks, etc.; and the smaller portions are ground down for manure.
- (5) When alive it is useful as a *beast of burthen*, and for *ploughing* on light soils, being cheaper to maintain than the horse. In the East it is used in threshing out the corn by treading.⁽⁶⁾

METHOD.

- (1) Show a picture of the cow.
- (2) Draw a diagram of the stomachs on the board.
- (3) Contrast with the neck of the elephant.
- (4) These insects make the cows "gad," and so spoil the milking properties of the cow; perforating their skin to deposit their eggs inside. The grubs can be squeezed out of her skin when hatched.
- (5) Ruminants are in a wild state devoured by carnivora, etc.; they eat their meal and masticate it afterwards when high and safe on the mountains.
- (6) Summarize and question on the whole.

NOTES OF LESSON ON WHEAT.

Subject Matter.

- I. DESCRIPTION⁽¹⁾.—This is one of the cultivated grasses, and has a fibrous root, jointed hollow stem making the straw; and grains covered with chaff. Liable to three diseases: blight, mildew, and smut. *Blight*, when the leaves of the plant and stalk are shrunk up and withered. *Mildew*, when the straw and ear are affected. *Smut*, ears filled with a

black powder, instead of grain. All three are cases of fungous growth.

- II. **WHERE CULTIVATED.**—The best English wheat is grown in Kent and Essex. It is cultivated in all civilized, warm-temperate regions, especially in Russia and America. The best in the world grown in Australia, Prussia, Egypt, Turkey, and North America.⁽¹⁾
- III. **MODE OF CULTURE.**—The red varieties are the largest producers, though not so profitable to the miller, and these best resist the mildew and fly. Polish wheat is white, hard, and thin-skinned. Egyptian or mummy wheat is coarse, but very fruitful, often having even eleven stalks to the root, and eleven grains in one ear. Wheat is sown both in autumn and spring, but the former is more profitable and hardy. The red kind is grown on cold strong clays; the white, which is superior, on lighter lands. The seed is sown by hand or drill, and covered over with the harrow, and rolled. The plant requires much hoeing to free from weeds, and is reaped by sickle, scythe, or machine.[!]
- IV. **USES.**—Wheat is the most important article of food; and bread is “the staff of life” in temperate climates; flour also is made into starch, semolina, vermicelli, macaroni, etc. When ground, wheat makes superior and inferior flour (*firsts* and *seconds*), pollard, and bran; the latter used for horses, cows, etc.; and the pollard (*sharps*, *boxings*, and *fourths*) for pigs, etc. The straw is used for bedding, feeding lean stock, mattresses, thatching, packing, etc. The chaff is also used for some of the same purposes.⁽²⁾

METHOD.

- (1) Show diagram of plant, and specimens of grain, chaff, and straw.
 (2) Point out on the map.
 (3) Question and summarize.

NOTES OF LESSON ON SALT.

Subject Matter.

- I. WHAT IT IS ⁽¹⁾.—This is a common mineral, of a white, sparkling, crystal character; very soluble in water, 100 lbs. of which will dissolve 35 lbs. of salt. It absorbs moisture from the air, and becomes damp in moist places.
- II. WHERE FOUND ⁽²⁾.—Salt occurs in beds of rock-salt sometimes 100 feet thick, and in solution in brine springs, and as incrustations on the surface of the earth near shallow salt lakes (or lagoons of the sea). In England it is abundant in Cheshire, Yorkshire (Middlesborough), and Worcestershire, as rock-salt, and in brine springs. It is also plentiful in some countries abroad. In Cheshire it is reached from ten to sixty yards below the surface. The rock-salt is blasted; the brine is also pumped up, and the water evaporated by boiling. It is also found in sea water, from which it is obtained by evaporation in salterns. The chief towns in England engaged in the salt trade are Northwich and Nantwich.
- III. USES.—It forms a large article of English export, 1,000,000 tons, half that raised in Cheshire, being sent out of the country. It is present to a slight extent in the blood, from which it is secreted, in bile, tears, etc. Its great use is as an antiseptic, preserving food from putrefaction, and it is much employed for curing beef and pork for sea voyages. It is largely used in the manufacture of *Soda*, of which 3,000,000 tons are annually made. Cattle require salt with their food, and this is either given directly, or blocks of rock-salt are put in the fields.

Large quantities are also used for glazing pottery, bleaching, manure, etc.⁽³⁾

METHOD.

- (¹) *Show the class a piece of rock or table salt.*
 - (²) *Point out place named on the map.*
 - (³) *Question and summarize.*
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When the First Standard in a school is composed of backward children, much time is necessarily devoted to prepare them in the "3 R's;" but lessons on familiar objects and animals will relieve the more mechanical work, refresh the minds, and improve the general intelligence.

When the First Standard has passed through the Infant School the previous training of the Object Lessons should be carried on with more reference to the exercise of the judgment. The following are good subjects to teach: Elephant, bear, whale, lion, eagle, crocodile, coral, sponge, palm-tree, orange-tree, tea-plant, coffee-plant, rice, arrow-root, sago, raisins, pepper, etc.

CHAPTER VI.

NEEDLEWORK AND SINGING (STANDARD I.).

NEEDLEWORK.—(1) *To fix and work a sew and fell seam of 5 inches in cotton of two colours, so as to show a join in the cotton, both in seam and fell.*

(2) *To cast on 12 loops, and knit 12 rows, ribbed, purl, and plain, and afterwards cast off.*

Optional.—To pleat 7 inches into 6 pleats, and hem it into a band of 3 inches.

Materials required.

(1) *Two pieces of calico 5 inches by $2\frac{1}{2}$, and cotton of two colours.*

(2) *A pair of knitting-pins and cotton or wool.*

Optional.—A piece of calico 7 inches by 3, and a piece 3 inches square.

The student is referred to Part I. for Needlework in general.

[*The following hints and instructions, Standards I.-II., have been drawn up by the Head Mistress of a large Girls' School, which has been pronounced excellent in this department. Beyond these Standards the teacher is referred to Needlework Text-books for any new stitches.*]

The requirements of this Standard as set forth in the new Code, 1883, are *hemming* in two colours (so as to show a join), *seaming*, and *felling*, with the ability to fix

each of these stitches; also to *cast on*, and knit with chain edge; and then *cast off* a few rows of knitting.

As the method of teaching the fixing of a hem has been fully explained in the pages devoted to "Needlework for Infants" in this book, we will pass on at once to the method of *joining*. All the children in the class being busy hemming with coloured cotton, the teacher tells them to break off. If the cotton breaks off close to the material, the children must be allowed to unpick about three and a half stitches, so as to have an end about half an inch long to tuck under the fold of the hem. The object of having half a stitch unpicked is, that a neater join is made.

The children having all been supplied with a piece of cotton of another colour, are told to thread their needles. The teacher should then herself take up a piece, which has been previously hemmed, about as much in length as the children's, and taking her needle in her hand, she should direct the children to watch her narrowly. She should then place her needle in the fold of the hem, pointing to the right, and draw it through, leaving an end of cotton about half an inch in length. The children should be allowed to do the same. The teacher should next carefully tuck both ends under the hem, and tell the children to do likewise. They should then be allowed to hem a few stitches, and repeat the process of breaking and joining, again and again, until they can quite master it. The children must be constantly reminded that in hemming every stitch must be distinctly seen on each side.

It is a good plan when hemming to ask children such questions as the following:—What garments do we wear that are hemmed? Which parts of such garments are hemmed? Of what material are such garments made? (Chemises and night-dresses are generally made of calico, either bleached or unbleached, aprons or pinafores of

holland, print, or muslin). From what sources do these different materials come? etc., etc.

Seaming and Felling.

After the children have thoroughly mastered joining they might proceed to "seaming" or "oversewing." For this purpose, the strips which have been used for hemming can be utilized. Each child should have two pieces, and after receiving cotton, and threading the needle, a knot might be made, and the two pieces tacked together. Great care should be taken that these are exactly of the same length, so that there may be no excuse on that account for "puckering," a common accompaniment of seaming with young children.

The teacher should tell the class to place their work *round the end* of the first finger of the left hand, not *across* it, and to hold it firmly with the thumb and second finger. For the first stitch, only the side of the hem nearest the worker should be taken, and an end about half an inch long left to be sewn in. In seaming, the teacher should tell the children that the right arm must never touch the side, and the needle must be put into the material exactly *opposite* the worker's chest, otherwise the work will "pucker." The teacher must not allow the children to take their stitches more than one thread deep on each side, and when fastening off, it is advisable to let them work three or four stitches back.

The teacher should demonstrate every detail by working herself, on pieces exactly like the children's; or if the class be very large, she should have pieces of larger size, so that all may distinctly see each step. A blackboard and chalk are invaluable helps for teaching tacking, etc., in the hands of a skilful instructor. To teach *the fixing of a seam and fell*, each child should be provided with 2

strips of paper, about 5 inches long by 2 in width. (Old exercise books serve well for the purpose, as the lines are a great guide to the children in folding straight.) The teacher must show that to make a sew and fell seam, one piece has to receive a double fold, the other piece a single turn. She must carefully demonstrate each step herself on paper, and see that the children follow her. As soon as the difficulties of the folding have been conquered, the children should be promoted to material. Each child should then be provided with 2 pieces of calico about 5 inches in length by $2\frac{1}{2}$ in width. The teacher should also have two pieces herself, and taking one of them by the right-hand corner between the first finger and thumb of her right hand, she should direct the children to do the same. They should then be told to turn down one side of the calico, about 6 threads deep, as for the first fold of a hem, taking great care that it is turned level to a thread.

When the end has been reached, the teacher should turn her calico round, and direct the children to imitate her, and turn the same side again towards herself, 8 threads deep. Having reached the end, the teacher should tell the children to lay that piece down, and take up the other, and turn that 6 threads deep. After ascertaining that both pieces are turned exactly to a thread, the children should be told to tack them together, and then seam them. When the seam is completed, the tack-threads must be taken out, and the seam flattened. Bone flatteners are much to be preferred to finger-nails, or thimbles, as they do not soil the work. The double fold must be turned over the single one, the fell carefully tacked down, and the children told to proceed as in hemming. The class might be asked to name garments which require seam and fell, the position of such seam, and fell the material used in the garment, etc.

Knitting stitch having been taught to the upper division of Infants, the teacher can next take "casting on."

Having provided herself and each child with 2 needles and coarse cotton, she should take up the cotton a short distance from the end between the first finger and thumb of the right hand, and lay it between the third and fourth fingers of the left hand, end outwards. Then turn the cotton round the thumb of the left hand, put the needle under the cotton, and perform the operations of "Round," and "Catch," and slipping the cotton off the thumb, the stitch must be retained upon the needle. The second needle must now be put into the stitch just made, and the "In," "Round," "Catch," performed, and the stitch just made placed upon the left-hand needle. This exercise can be repeated, until the number of loops required is on. The chain edge is made by holding the cotton as for purling, then slip the first stitch, replace the cotton, as for knitting, and proceed to knit as usual. In "casting off" the children must knit two stitches, then take the first over the second. More than two stitches must never be on the needle at once, and great care must be taken that the cotton is not drawn too tightly.

After the children have mastered the difficulty of casting on and off, they can knit strips for cradle quilts, bath towels, toilet covers, etc.

The following memorandum on Needlework by the Rev. C. Sewell, H.M.I., may be found useful:—

"GIRLS' SCHOOLS.—There is little to be said about the ordinary sewing of Girls' Schools. It is understood that counter-hemming and pleating, though not often used by practical seamstresses, are to be taught to children, so as to enable them to make garments, for which seaming and felling and gathering are commonly used, at an earlier period than that at which they could be expected to master those more difficult stitches. Particular pains should be

taken to fix the *backs of patches*, and darn sufficiently loosely. The most difficult and least practised operation is that of *cutting out*. It begins in stage 4. All girls in the stage should be taught as a class, or at least in sections according to desk accommodation. Two lessons a week should be given. Three garments taught. Paper, exactly enough for each, of a wearable size if possible should be supplied, and no cutting to waste allowed: the proportions of these to be learned and no patterns used. The girls imitate the teacher at the table in folding and cutting, till they can do it quickly, neatly, and accurately. The work to be tacked but not trimmed. In Stage 5, more and more complicated garments are cut out in paper. In Stage 6, girls have sufficient skill to be trusted with calico or print. They have by that time acquired confidence, certainty of hand, and economy in the use of material. Sharp scissors are necessary. Opportunities for much practising of fixing may be found for the elder girls on the garments made by the younger; who in turn find practice for their simpler work, in the simpler parts of those of their elders.

"The Managers should provide, before the day of inspection, and have ready for distribution, suitable pieces of material, according to the different 'Divisions' and 'Stages,' together with a full supply of needles, cotton, *scissors*, *thimbles*, etc., and paper (newspaper or ruled to show *selvedge*) for cutting out.

"P.S.—It may be convenient that some such materials as the following should be provided ready for distribution on the day of inspection to each girl who is presented under Art. 19, c. 2:—

STAGE I.—A strip of white or unbleached calico 7 inches by 3. For those who are called upon to do counter-hemming, these will be divided so as to form two pieces.

STAGE II.—A piece of white or unbleached calico 4

inches square. For those who are called upon to do seaming and felling, these will be divided so as to form two pieces 4 in. by 2 in.

STAGE III.—A piece of brown holland about 4 inches square, pieces of tape about 2 inches long, canvas for darning and marking, and flannel for herring-boning.

STAGE IV.—A piece of brown holland, of coarse though thin linen, or of calico, about 5 inches square, linen buttons not pierced, pieces of stocking material (coarse) for darning, and flannel for herring-boning.

STAGES V. and VI.—Same as for Stage IV., only of finer material, and with the addition of cambric or mull muslin for frills, and of paper (newspaper or ruled to show selvedge) for cutting out."

SINGING.

INSTRUCTIONS AS TO EXAMINATION IN SINGING FOR GRANTS UNDER ARTICLES 106 (*d*) AND 109 (*d*).

"Education Department, *Feb. 14th*, 1883.

"(1) If during the examination the Inspector should notice that one or two voices are leading the bulk of the children, such voices must be silenced.

"(2) Teachers may be allowed to start, but not to join in, the singing, except when adding a bass or independent part to the song test.

"(3) In Girls' Schools the Examiner will often save much time and trouble by asking a *female teacher* to sing the passages given as ear tests.

"(4) As Inspectors may find that the application of every test to each of the four divisions will occupy more time than can be fairly allotted to this one subject, it may suffice for the purpose of recommending the larger grant of one

shilling, if the Inspectors apply *two* of the tests to each division.

“(5) The staff notation tests will be found equally applicable to the systems of ‘moveable *Doh*.’ A complete set of tests under the tonic sol-fa system has been given, closely corresponding to those of the staff notation.

“(6) In schools where both the tonic sol-fa and staff notations are taught, the three lower divisions may be presented for examination on the tonic sol-fa method, and the highest on the staff system.

“(7) The Examiner may, if necessary, avail himself of the assistance of the teacher, in playing or singing the ear tests to the children.

“(8) The children may sing the song tests from books containing both words and music.

“(9) Schools applying for the higher grant but failing to secure it, may receive the lower grant of sixpence, if the children can pass the song tests prescribed below.

“(10) Three songs must be prepared for the song test in the 1st division, and five in each of the other divisions.

“(11) For the purposes of examination schools may be thus classified :—

1st Division = Infants above 5 years of age, and
below Standard I.

2nd ,, = Standards I. and II.

3rd ,, = Standards III. and IV.

4th ,, = Standard V. and upwards.

“N.B.—(1) In schools examined before May, 1884, each standard may be presented in the division lower than that here assigned to it.

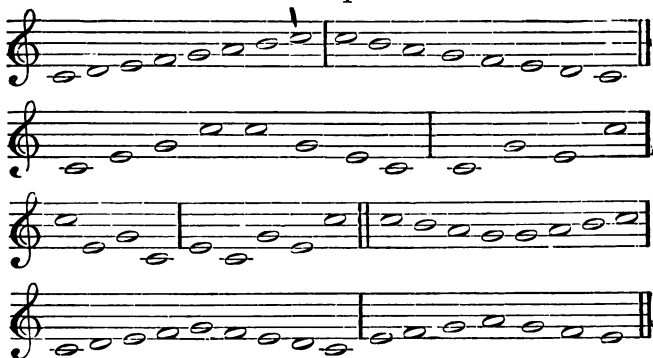
“(2) It is not necessary that the classification for singing should correspond exactly with the ordinary division into standards.

“(3) The 1st and 2nd divisions may, if preferred, be grouped together both for teaching and examination.”

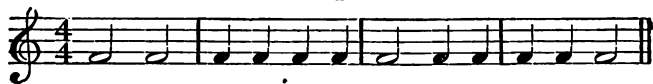
PART I.—FOR SCHOOLS USING THE STAFF NOTATION.

“*Division II., for Standard I. (Infant ‘Classes’).*”

“*Note Test.*—(1) To sing slowly, as the Examiner points to the notes and using the sol-fa syllables, the ascending and descending notes of the scale of C (*Doh*), the notes of the key-chord of C (*Doh*) [C (*Doh*), E (*Mi*), G (*Sol*), C (*Doh*)], in any order, and also small groups of consecutive notes of the scale of C as written by the Examiner.

Example.

“*Time Test.*—(2 a) To sing on one sound, to the syllable ‘*laa*,’ an exercise in $\frac{2}{2}$ or $\frac{4}{4}$ time, which shall include minims and crotchets.

Example.

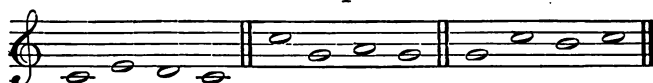
“(2 b) Or, to name the value of the same notes rhythmically and in time, without singing them ; thus,

Minim, minim, | Crotchet, crotchet, crotchet crotchet |

Minim, crotchet, crotchet, | Crotchet, crotchet, minim |

"Ear Test.—(3) To repeat a simple phrase of not more than four notes, using the syllable 'laa,' after hearing the Examiner sing or play it twice through.

Example.



"Song Test.—(4) To sing in unison or in two parts, if preferred, in good time and tune, and sweetly, a school song (set to words) previously prepared."

PART II.—FOR SCHOOLS USING THE TONIC SOL-FA METHOD AND NOTATION.

Division 2.

Note Test.—(1) To sol-fa slowly from the Examiner's pointing on the modulator, in several keys (the key-tone in each case being given), the tones of the *Doh* chord in any order, and the other tones of the scale in stepwise succession.

Example.

d m s d' s m s d m r d m s l s f m s l t d'

Time Test.—(2) To sing on one tone to the syllable "laa," an exercise including one-pulse and two-pulse tones, in two-pulse or four-pulse measure.

Example.

| 1 : 1 | 1 :— | 1 :— | 1 : 1 | 1 :— ||

Ear Test.—(3) To imitate a simple phrase of not more than four notes, using the syllable “*laa*,” after hearing the Examiner sing or play it twice through.

Example.

d n r d || d' s l s || s d' t d' ||

Song Test.—(4) To sing in unison or in two parts, if preferred, in good time and tune, and sweetly, a school song (set to words) previously prepared.

The following scheme for teaching tonic sol-fa has been prepared by Mr. Watkins, Music Instructor to the London School Board:—

IN BOYS', GIRLS', AND MIXED SCHOOLS.

“APPARATUS REQUIRED IN EACH SCHOOL.—

- (1) Modulator.
- (2) School Charts (new edition).
- (3) Class Books.

“TIME.—(1) Weekly lesson for half an hour.

- (2) Ten minutes daily.

Distribution of Time.

“ (1) Weekly lesson—	Voice training	...	4 min.
	Modulator exercises	...	6 „
	Ear exercises	...	5 „
	Time exercises	...	5 „
	Singing of exercises from		
	charts or books	...	10 „
“ (2) Daily lesson—	Voice training	...	3 „
	Modulator	...	3 „
	Ear tests and singing		
	alternately	...	4 „

DIVISION II., STANDARD I.

"Tune.

"(1) To sol-fa slowly from the teacher's pointing on the modulator, in different keys (the key-tone in each case having been given), the tones of the *Doh* chord in any order, and the other tones of the scale in stepwise succession.

"(2) To sing similar exercises from the manual signs.

"(3) To sing similar exercises of two or three tones from dictation. By dictation is meant that the teacher, having given the key-tone, shall name some notes, and require the children to sing the sounds represented by these notes.

"(4) Ear Tests—

(a) To imitate a simple phrase of not more than four notes, using the syllable 'laa' after hearing it sung twice.

(b) To tell the tone *Doh*, *Me*, or *Soh*, on hearing it sung three times to the syllable 'laa,' the key-tone having been sung.

"Time.

"(1) To sing in correct time Exercises 1 to 10 of the School Charts on one tone to the syllable 'laa.'

"(2) To sing in correct time on one tone 'laa' an exercise written on the blackboard, including one-pulse and two-pulse tones, in two-pulse or four-pulse measure.

"Time and Tune.

"(1) To sing in time and tune any one of the Exercises 1 to 10 of School Charts, the time having been first learnt.

"(2) To sing as above a similar exercise from the blackboard.

“(3) To sing sweetly in unison or in two parts, in good time and tune, five school songs.

“Voice Training.

“(1) The teacher must insist on soft singing, with mouths well opened.

“(2) A short daily exercise to be given in singing the chord of the tonic (**d m s d'**) in keys C and D, very softly to syllable ‘*ah*,’ sustaining each sound about a second.

“(3) Scale exercises in keys C and D. These should be practised downwards and very softly. Children who sing out of tune must listen attentively : they will in a short time be able to join the rest.”

CHAPTER VII.

STANDARD II.

[If the teacher of Standard II. has not previously taught Standard I., he should read the part preceding this, to learn how the children have been already taught.]

SCHEDULE I. (NEW CODE, 1883).

READING.—“*To read a short paragraph from an elementary reading-book.*”

“*Reading with intelligence will be required, and increased fluency and expression. Two sets of reading-books must be provided for Standard II. The Inspector may examine from any of the books in use in the Standard. The intelligence of the reading will be tested partly by questions on the meaning of what is read.*” (New Code, 1883.)

“*In Standard II. two ordinary reading-books may be used, unless the managers prefer that the second book should be a Geographical or scientific reader to correspond to the second class subject. An ordinary reading-book will provide a sufficient amount of good literature for exercise in the art of reading, and for all the purposes of teaching English if taken as a class subject.*”

“*In Standard II. intelligent reading will probably suffice to justify a pass without much examination into*

the matter of the book; but it should be considered a grave fault if children, etc." (see p. 7, Instructions to Inspectors.)

WRITING.—"*A passage of not more than six lines, from the same book*" (as used in the Standard), "*slowly read once, and then dictated word by word.*"

"*Copy-books (large and half-text hand) to be shown.*"

"*The writing (and Arithmetic) may be on slates or paper, at the discretion of the managers.*" (New Code, 1883.)

"*In Standard II. the exercises should be on slates, security for writing on paper being provided by the exhibition of copy-books. The same qualities of writing should be required as in Standard I.*" (see p. 29), "*but greater importance should be attached to evenness and uniformity, and the proper spaces between the words. Capitals should be required to be put without direction after full stops and at the beginning of proper names. The passage for dictation should be carefully selected as being of average difficulty, and free from puzzling words. As children may generally be expected to pass easily in the mechanical art of writing in this stage, five mistakes in spelling might, as a rule,—if the passage selected be sufficiently easy—suffice to involve failure.*" (Instructions to Inspectors.)

[The teacher may first read the passage, see p. 8.]

ARITHMETIC.—["*The work of girls will be judged more leniently than that of boys.*"] "*Notation and Numeration up to 100,000; the four simple rules to short division; the multiplication table and the pence table to 12s.*"

"*Short exercises in Mental Arithmetic* (see p. 8).

"*The Inspector may examine scholars in the Arithmetic of the preceding Standard.*" (New Code, 1883.)

(For "Instructions to Inspectors," see p. 7.)

"*In Mental Arithmetic practice should be given in all*

the four rules, with numbers up to 144, and with money to 10s."

"It is often found a help in calculation if the dimensions of the schoolroom, the play-ground, and the desks, and the weight of a few familiar objects are accurately known and recorded, and occasionally referred to as standards of measurement." (Instructions to Inspectors.)

CHAPTER VIII.

READING (STANDARD II.).

VERY little will be required to be said on this subject, more than has been inculcated on Reading in Standard I.; but the teacher is referred to this part of the book for the general principles of teaching the "3 R's."

The reading matter is more difficult than in the preceding Standard; but the children have also acquired more power over combinations. *Accuracy* will be secured by the methods already suggested; and the teacher should now devote more attention to *intelligence* and *expression*. The subject matter should be more thoroughly explained and illustrated; and Object Lessons should be given on those subjects in the lessons which are suitable for blackboard illustration. If a geographical or scientific reading-book be one of the two used, *every* one of the lessons in this should be preceded by a distinct Object or Collective Lesson upon it.

The poetical extracts in this stage should also be better rendered than in Standard I.; and the meanings more copiously explained.

As before, the spelling should be taken, to a great extent, with the reading; but in addition the more difficult passages should be marked in the *teacher's* book, and given out for dictation; while formal lessons in spelling may be given by the teacher from some recognized Spelling Text-book.

The Grammar ("English") should also be closely associated with the reading lesson proper ; the organic connections of the nouns and verbs with the rest of the sentence being thoroughly insisted on. Slate and paper practice should also be given in picking out these parts of speech. This may be done—

(1) By arranging the nouns and verbs in two separate columns, headed nouns and verbs respectively.

(2) By marking these above with N. and V. in the dictation exercises.

(3) By underlining the nouns, and doubly underlining the verbs in the dictation.

Each new word should be carefully explained and written on the blackboard. *Definitions are of less value than actual examples of the mode in which every word is employed.*

We would strongly recommend the systematic learning and reciting of poetry as a valuable means of cultivating the imagination, rendering the ear sensitive to rhythmic constructions, improving the delivery, and extending the vocabulary. The poetry should be learnt from the book, and not by parrot-like vocal repetition.

Purity of pronunciation, and distinctiveness of articulation, should be carefully cultivated. Great pains should also be taken to prevent the blurring of the vowels in the unaccented syllables of words.

NOTES OF A LESSON ON READING (STANDARD II.).

[Time—Thirty minutes. Apparatus—Reading-books and blackboard.]

(Preparation notes of the lesson to be prepared.)

- I. (1) *Fifteen minutes.*—The teacher should read aloud the whole passage. Then do the same with a few words at a time,⁽¹⁾ the class repeating

these simultaneously.⁽¹⁾ Lastly, the class should read the whole sentence simultaneously, first with, then without the teacher.⁽²⁾ Fix straggling attention, by questioning the inattentive: and let hands be held up for mistakes perceived.

- II. (2) *Ten minutes*.—The children should individually read the foregoing passage, the weakest readers being most called on. Occasionally parts of the class (a side of a hollow square, or a row in the desks), should be made to repeat a sentence in which mistakes have been corrected; ⁽⁴⁾ and a good reader may be allowed to read a sentence first instead of the teacher. To check looking off books, the children should occasionally be called on to take up instantly a sentence left incomplete by another reader; but remember too much of this will mar expression.

- III. (3) *Five minutes*.—The mistakes in the words are corrected on the blackboard, and the children are questioned on the passage read. The hard words should be used as a spelling exercise; or the lesson should be begun with this (this is still better, as then the attention will not be diverted from the subject matter).⁽⁵⁾

METHOD.

- (1) *The clauses should be logical and grammatical parts of the whole.*
- (2) *The expression of the teacher (emphasis, pause, pitch, rate, loudness) should be closely imitated.*
- (3) *Mispronunciations, and thick blurred utterances of individuals, should be corrected; and most vigorous attention should be given to detect these in individuals.*
- (4) *These mistakes should be written on the board, and provincialisms should be corrected.*
- (5) *Remember that the main object of the lesson is reading (and spelling), not explanation of subject matter, at least in the ordinary reading-book.*

" Prepare every reading lesson beforehand, and impress on your memory the main points on which you intend to dwell; for example, the subject treated of, the explanation of difficult words and phrases, the introduction of brackets or other peculiar marks, the nature of quotation marks, reading spoken passages dramatically, etc.

Every child should be furnished with a reading-book. When the class is seated at desks each book should rest on the desk; but when any child stands to read, the book should be held at such a height as to suit his sight, and play of voice, *and yet leave the face visible to the teacher.* If a child blunders or is unable to proceed, you should allow those who can correct the error or solve the difficulty to do so. You should refrain from giving help yourself too readily. Never tell a child when he is able to discover for himself.

Require every one who has blundered to read the passage over again accurately.

When a child reads inaccurately from not being well acquainted with either the appearance or meaning of a word, you should carefully explain and illustrate the meaning to the whole class, and let them spell the word once or twice. (Liverpool Code of Instruction to Pupil Teachers.)

PRACTICAL ILLUSTRATION OF THE ABOVE LESSON.

The Deer.

(Crown Reader—Standard II.)

[The periods (.) mark the "phrasing" of the teacher; the words in *italics* are those to be selected for *spelling*. The judgment of the individual teacher may be left to determine which of the words to be spelt also require to be explained.]

animals	graceful	hedges	countries
timid	enable	fences	chief
sense	leap	different	reindeer

1. "Deer are *animals* · which mostly have horns, · and are fond of the rocks · among the hills and mountains. · They are very *timid*, · and hard to get near in hunting, · as they have a keen *sense* of smell, · and are swift besides.

2. They have long *graceful* legs, · thin and strong, · which *enable* them to fly, · as it were, · over the ground, · and leap over *hedges* and *fences*, · with great swiftmess.

3. There are very many *different* kinds of deer · in different *countries*, · some being in cold places on the mountains, · while others like warm countries. · Among the former · the *chief* is the *reindeer*," etc.

Stage I.

The teacher reads the passage aloud down to, "etc."

She then reads the first paragraph from · to ·, the class repeating after her.

The class next reads paragraph 1 simultaneously after, and then without the teacher.

Stage II.

The children read paragraph 1 individually, the slowest children reading most. Corrected sentences may be repeated simultaneously, by groups in the class. One of the best readers may be called on to read one of the sentences. If a child's attention be found wandering, it should be required to pick up the reading instantaneously.

Stage III.

The teacher is supposed to have underlined in her own book, the words which have been mispronounced during the lesson. These should now be written out on the blackboard.

The class should be examined in the meaning of the passages read; e.g. What have deer usually growing on their heads? Where do deer commonly live? What

kind of disposition have deer? What means have they of escape from enemies? And so on with the other paragraphs.

The words left on the blackboard should be learnt from it, and rewritten without copy, at dictation, on the slates.

SUMMARY OF TEACHING TO READ (STANDARD II.).

(1) Keep in mind the points to be aimed at, viz. *Accuracy, Intelligence, Fluency, and Expression.*

(2) The children are to have a better meaning of the substance of the passages read, than was the case in Standard I.

(3) To secure this there must be more *Illustration and Explanation* from the teacher.

(4) Prepare Object Lessons on the subjects of the lessons, and let these include the facts referred to in the reading lesson.

(5) Look out for illustrations to these facts, and note them in the prepared Teaching Notes.

(6) Keep in mind the particular use of the poetical extracts.

(7) Let every reading lesson be also a grammar and spelling lesson.

DIFFICULTIES TO BE ANTICIPATED AND MET.

(1) At first the children can give little attention to the subject matter of the reading lesson. Help them with explanation and interesting illustrations. At a later stage draw more and more from the children's *own* observation.

(2) Until the class acquires some facility in reading the new book, the children will find it difficult to "phrase" of their own accord.

(3) The spelling will be even more difficult than the reading, and more so in this Standard than in any other. Constantly appeal to the eye of the child, both in words on the blackboard and in the book.

(4) The children will want to stop at the ends of the lines in poetry, even when there are no stops. Let some of the poetry be written *as prose* on the blackboard, and read thus.

(5) In even the best reading-books there will be words and phrases beyond the grasp of the child. Some of these *cannot* be explained to Standard II. children; this will be especially so with poetry.

(6) To read well requires a quick appreciation of meaning, aptness at catching similitudes, and contrasts; and sympathy with the real or feigned shades of feeling of the author. The eye must anticipate the mouth, and head and heart must think and feel together.

PRACTICAL HINTS FROM H.M.'S INSPECTORS' REPORTS ON READING (STANDARD II.),

"In schools where the reading is not skilfully taught, certain mistakes are so common as to indicate a general want of attention to important points of detail, e.g. words like admire will be pronounced amire, midst as mist, several as sev'ral, generally as genally, etc. In spelling, again, there is found a prevalent uncertainty as to whether full when compounded should have one 'l' or two: the e mute is not dropped before ing, and there is still much confusion between the words there, their; were, where, etc.

"These mistakes should be anticipated, and the words themselves and their construction carefully explained; without this precaution, the children will naturally fall into them. Their prevalence in a school may generally be taken to indicate a want of skilful teaching."—MR. FUSSELL.

"The reading might be improved in style if good recitation of suitable pieces of prose or verse, ever so simple, were demanded in all classes."—MR. PAREZ.

"I have found good reading where the girls had learnt poetry and the mistress had taken pains that they should enter into the spirit of the piece, and repeat it clearly and with expression."—MR. SANDFORD.

"A child cannot possibly read well what he does not understand; therefore, in all Standards below the Fourth, at any rate, the first part of every reading lesson should consist of a short comment on the passage to be read, with full explanation of all difficult words found in it. The amount of information derived from the reading lesson should always be thoroughly tested by examination at its close."—MR. VERTUE.

"Poetry requires more skilful teaching than prose, its figures have to be carefully explained, its inversions pointed out and accounted for, its abrupt and elliptical constructions drawn out at full length."—CANON WARBURTON.

"Large classes should always be subdivided for reading lessons, in order that every child may have an opportunity of reading several sentences, instead of being restricted as is too often the case, to a few words."

"The want of expression can only be remedied by drawing forth the imitative powers which most children possess; this can be done by making them go through a passage previously read and explained to them by the teacher."—MR. YARDE.

CHAPTER IX.

WRITING (STANDARD II.).

THE teacher of Standard II. should refer to the instructions and requirements in Writing in Standard I. So far as spelling is concerned, this has already been dealt with; and it is principally in the dictation that the writing will be judged.

The writing on slates in this Standard will be now diminished in size to round hand, and the slates and exercise paper should be ruled to this pattern. Paper writing will be more and more practised towards the close of the school year; and, if the class be well taught, the writing will now be legible, and have some marks of beauty of form in it. Very frequently the handwriting in this and the succeeding Standard is quite ruined by too much dictation, or transcription on slates. The dictation exercise should be limited to its proper function—that of testing, not teaching, spelling.

One point to be carefully noted was suggested by Locke, two hundred years ago, in his work, “Some Thoughts concerning Education,” in which he says:—

“Every one comes by degrees to write a less hand than he at first was taught, but never a bigger.”

If the writing be well taught, it will immensely aid in the *discipline* of the school, and in the *Order*, since it

implies the perfection of detail, persistent uniformity, and good writing drill.

Sometimes exercise-books are more used in a school than copy-books ; but in this stage it is better to trust to copy-books chiefly, and to leave dictation exercises on paper for more occasional use. The advantage of using exercise-books rather than copy-books is that the Head Master's style of writing becomes uniform throughout the school, being adopted by Pupil Teachers and scholars alike. But this implies that the Head Teacher ought to be an exceptionally good writer.

The copy-books and exercise-books should be carefully corrected in pencil by the young teacher during or at the end of the writing lesson. They should also be periodically sent in to the Head Teacher for examination. If both these are not done, the copy-books bring discredit instead of credit to the class and school.

The single maxim most to be inculcated in teaching is, "*A little and well.*" It is, of course, easy enough for almost any one with a true eye to point out individual mistakes in writing. But *teaching* writing means so correcting on the blackboard the mistakes of *one* individual as to deter the *class* from making the same.

REQUIREMENTS IN A WRITING LESSON (STANDARD II.).

(1) A blackboard, so placed that the writing on it may be seen by all in the class.

(2) The subject must be *taught*, not merely *examined* ; the proper formations of the letters, the joining of these together, the proper use of stops, the correction of common and individual errors must be attended to.

(3) The writing must be slowly done, that all alike be doing the same thing at the same time. If some are

allowed to hurry through their work, they will not merely lose time waiting for others, and have bad writing, but the discipline will inevitably suffer from the "idle hands" for which Satan still finds some mischief to do.

(4) The writing by the teacher on the blackboard must be *good*; nothing short of perfection should be aimed at though it may never be reached.

(5) Every lesson should begin with Writing Drill.

(6) The copy on the blackboard should not be written by the teacher *silently* or *all at once*, but should be accompanied with instructions and remarks, showing *how* and *why* it is done, and how it is to be *imitated*.

(7) The children should all write with two fingers on the pen. This is often inculcated by the teacher, but no school rule is so often transgressed without correction.

(8) Too many instructions should not be crowded into a single writing lesson. "*Not only children, but anybody else that would do anything well, should never*

"(a) *Be put upon too much of it at once;*

"(b) *Or be set to perfect themselves in two parts of an action at the same time, if they can possibly be separated.*"—LOCKE.

If the class writes ill, the reason is often because—

(1) The assistant has not paid careful attention to the instructions of the Head Teacher, or

(2) She has not perseveringly *corrected the exercises*. The children then write so much that they write badly; what is ill-written is only perfunctorily corrected, and so the child pays no attention to the correction. The order has been given, "Go on writing;" and the child goes "on," but not "forward." Laziness on the part of the teacher has become stereotyped in untidiness, raggedness, looseness, on the part of the class.

DICTATION.—*Rules.*

1. If the hard words are printed at the top of the lesson, let these be silently learned by the class previous to the reading and dictation.

2. If these are not thus selected, let each child pick out and write from the reading matter a given number of words which each child thinks are the hardest.

3. Let books be put away, and let the class write at the teacher's dictation a few of the hardest words selected by her, and a passage for dictation.

4. The passage should be first read *once* by the teacher, slowly and clearly, but not in a forced or mincing manner. The passage should then be broken up for dictation into natural clauses. Repetition should be avoided, as it encourages inattention. For the same reason, no erasures should be allowed; mistakes should be corrected by re-writing above the misspelt words.

5. In correction, *mark* the mistakes; and when all slates have been marked, correct the mistakes on the blackboard.

6. Let these corrections be written out six times by those who have made the mistakes.

7. As an alternative exercise the class may correct its own mistakes *from the books*.

For Notes of Lesson on Teaching Writing, Standard II., see Standard I. The writing should, however, now consist of short sentences as well as single words.

PRACTICAL HINTS BY H.M.'S INSPECTORS IN REPORTS ON
WRITING (STANDARD II.).

"I have seldom found the writing in a school good unless the children had been habituated from the beginning to write within lines on their slates."—MR. WILLIAMS.

"The absurd and gross mistakes often met with in writing arise from the foolish manner in which many teachers dictate the passage to their class. They pronounce the words syllabically, and they sound to the ears of the children quite different from any language they ever heard in common life, and so when they have to write the word, pronounced to them in the ordinary way, they are all at sea, and oftentimes write utter rubbish, and invent words unknown in any ancient and modern tongue."—MR. TREGARTHEN.

"I would urge upon teachers to promote drawing where practicable; drawing greatly assists writing. I very seldom find a boy writes badly who is a good draughtsman."—MR. GREAM.

CHAPTER X.

ARITHMETIC (STANDARD II.).

In this standard Simple Multiplication and Short Division are introduced.

Copious exercises in Mental Arithmetic should precede and accompany the mechanical work in these rules.

In working such exercises as 96549×842 , instead of multiplying by 4, as is usually done, the 2's line should be doubled. In the same way, instead of multiplying by 8, the 4's line should be doubled. Similarly when 3, 6, and 9 are used as multipliers, the 6's line should be double of the 3's line, and the 9's line treble the 3's line. All "short cuts" of this kind increase the inventiveness and intelligence of the class, and check the weariness due to mere mechanical work.

The use of the cipher in multiplying may be explained by reference to the 10 times multiplication table, in which it will be pointed out that $10 \times 1 = 10$, $10 \times 2 = 20$, etc., so that the effect of multiplying 1, 2, etc., by 10 is to add 0 to the 1, 2, etc. The rule is thus deduced, that in multiplying by *any* number, say 456 by 10, we merely add 0 to the multiplicand.

In the same way, $1 \times 100 = 100$; $2 \times 100 = 200$, etc.; and to multiply any number by 100, we merely add 00 to the right of the multiplicand. Similar remarks will apply

to 1000; and to the cipher occurring between integers in the multiplier.

In multiplying by 25, which is a fourth of 100, we add 00 to the multiplicand, and divide by 4; and in multiplying by 125, add 000 and divide by 8.

Besides the ordinary way of multiplying, say 8346 by 543, work the sum thus:—

$$\begin{array}{r}
 8346 \times 500 = 4,173,000 \\
 8346 \times 40 = 333,840 \\
 8346 \times 3 = 25,038 \\
 \hline
 8346 \times 543 = 4,531,878
 \end{array}$$

Every figure that can be saved in arithmetic should be so; thus, in 836×648 , we have $836 \times 8 = 6688$; now $64 = 8 \times 8 \therefore 836 \times 64 = 8$ times the preceding (to be put one place to the left); this gives—

$$\begin{array}{r}
 6,688 \\
 535,04 \\
 \hline
 541,728
 \end{array}$$

In Division, fractions should be thoroughly explained up to twelfths. Thus, $64 \div 2 = \frac{1}{2}$ of $64 = 32$, etc. These should be illustrated by reference to the aliquot parts of 1s., 2s., 2s. 6d., 5s., 10s., and £1; as well as of 1 foot, 1 yard, and 1 lb.; and by reference to a line, rectangle, and square, divided into aliquot parts on the blackboard.

MODEL LESSON IN MULTIPLICATION BY ONE FIGURE.

First Stage (without carrying).

$$\begin{array}{r}
 234 \\
 2 \\
 \hline
 468
 \end{array}$$

Point out that—

$$\begin{array}{rcl}
 \text{Twice 4 units} & = & 8 \text{ units} \quad 8 \\
 \text{,, 3 tens} & = & 6 \text{ tens} \quad 60 \\
 \text{,, 2 hundreds} & = & 4 \text{ hundreds} \quad 400 \\
 & & \hline
 & & 468
 \end{array}$$

Second Stage (with carrying).

$$\begin{array}{r}
 234 \\
 3 \\
 \hline
 702
 \end{array}$$

Point out that—

- 3 times 4 units = 12 units = 1 ten, 2 units.
 3 ,, 3 tens = 9 tens and 1 ten = 10 tens, or 100.
 3 ,, 2 hundreds are 6 hundreds and 1 hundred = 7 hundreds.

Third Stage, with two figures (without carrying).

$$\begin{array}{r}
 234 \\
 21 \\
 \hline
 234 \\
 468 \\
 \hline
 4914
 \end{array}$$

Point out that—

- 2 tens multiplied by 4 units = 8 tens.
 2 ,, ,, 3 tens = 6 hundreds.
 2 ,, ,, 2 hundreds = 4 thousands.

At first, the blank spaces on the right may be filled in by ciphers (0's).

MODEL LESSON IN SIMPLE AND SHORT DIVISION.

First Stage (without carrying).

$$\begin{array}{r}
 2 \overline{)648} \\
 \underline{324} \\
 2 \\
 \hline
 648 \quad \text{Like top line.}
 \end{array}$$

Proof—

Here point out that $648 = 600 + 40 + 8$.

$$\begin{array}{r} 600 \div 2 = 300 \\ 40 \div 2 = 20 \\ 8 \div 2 = 4 \\ \hline 648 \div 2 = 324 \end{array}$$

Second Stage (with carrying).

$$\begin{array}{r} 2 \overline{)748} \\ 374 \end{array}$$

Here point out that $748 = 700 + 40 + 8$.

$$\begin{array}{r} 700 \div 2 = 300 \text{ and } 100 \text{ left over.} \\ 140 \div 2 = 70 \\ 8 \div 2 = 4 \\ \hline 848 \div 2 = 374 \end{array}$$

Third Stage (with final remainder).

$$\begin{array}{r} 2 \overline{)749} \\ 374 + 1 = 374 + \frac{1}{2} \end{array}$$

And so on with harder sums.

The following typical exercises in Mental Arithmetic for Standard II. will indicate to the teacher the way in which others may be invented :—

EXERCISES IN MENTAL ARITHMETIC (STANDARD II.).

Notation and Numeration.

I. Express in words—

6,017	60,001	16,007
10,001	11,001	11,111
11,001	10,111	10,010

II. Name the figures which express—

Eleven thousand one hundred and one.

A hundred and ten thousand.

A hundred thousand.

Ten thousand one hundred and ten.

Multiplication.

III. Give the squares of—

7	8	9	10
11	12	13	14
15	16	17	18
19	20	30	40

IV. Give the factors of—

81	108	110	120
121	132	144	169

V. Name at sight the products of—

6,170 ×	10	90,017 ×	20
61,701 ×	40	67,019 ×	50
6,179 ×	60	11,110 ×	90
7,014 ×	80	61,794 ×	70
6,178 ×	100	1,679 ×	1000
617 ×	200	914 ×	300
9,081 ×	5000	1,794 ×	6000

VI. If I pick up 6079 stones a day, how many can I pick up in a week?

How many shillings in £456 16s.?

How many pence in 195s. 11d.?

How many farthings in 4s. 5½d.?

How many inches in 19 feet 11 inches?

How many inches in 79 yards long?

What is the rent of 199 acres at £12 per acre?

Find the price of 9 horses at £187 each.

A ship has 3791 tons; how much in 25 ships?

If 1 horse can draw 7967 lbs., what can 300 draw?

Short Division.

VII. Divide 56,784 marbles among 12 boys.

In 473,684 shillings how many pounds?

In 767,473 lbs. how many parcels of 7 lbs. each?

Eleven ships brought over 167,961 lbs. : how much did each bring ?

47,698 persons went to a show in a week : how many daily ?

VIII. To divide by 10, 100, 1000, etc., cut off 1, 2, 3, etc., noughts. To divide by 20, 30, etc. ; 200, 300, etc. ; 2000, 3000, etc., cut off noughts as before, and divide by 2, 3, etc.

$60,179 \div 10$	$161,700 \div 20$
$198,767 \div 50$	$610,716 \div 90$
$136,794 \div 100$	$160,117 \div 500$
$147,967 \div 1000$	$147,967 \div 1100$

IX. To multiply by 25, add 2 noughts and divide by 4, since 25 is the fourth part of 100.

$61,798 \times 25$	$167,941 \times 25$
$81,679 \times 25$	$179,467 \times 25$

X. To multiply by 125, add 3 noughts and divide by 8, since $8 \times 125 = 1000$.

$81,479 \times 125$	$147,011 \times 125$
$818,179 \times 125$	$841,791 \times 125$

To multiply by 5, add nought and divide by 2.

XI. To divide by 5, double the number and cut off last figure. To divide by 25, multiply by 4 and cut off 2 figures.

$816,798 \div 25$	$81,476 \div 25$
$64,796 \div 25$	$131,701 \div 25$

XII. How many lbs. in 16,870 oz. (16 oz. = 1 lb.) ?

How many feet in 119,981 inches (12 inches = 1 foot) ?

Convert 607,918 farthings into pence.

Turn 81,479 pence into shillings.

How many pounds in 607,198 shillings ?

There are 278 boys in 12 desks : how many boys are there in each desk ?

Share £197 10s. among 12 boys.

Divide a sovereign equally among 16 boys.

What is the twelfth part of 60,796 ?

If you can buy 4 lbs. of tea for 10s., what quantity can you buy for a sovereign ?

Eleven boys cost at school 121,099 pence : what does each cost ?

XIII.—How many fives in $48 + 10 + 20 + 2$?

„ „ fives in $113 + 27$?

„ „ fives in $257 + 233$?

„ „ tens in $390 + 490$?

„ „ tens in $190 + 290 + 390$?

„ „ twenty-fives in 200 ?

„ „ twenty-fives in $225 + 325$?

„ „ twenty-fives in 1000 ?

„ „ twenty-fives in $2400 + 3200$?

„ „ twenty-fives in $2000 + 3000$?

In making problems, bear in mind the actual necessities of the working classes.

MENTAL ARITHMETIC (STANDARD II.).

(Continued from Scheme in Standard I.)

Extension of Money, Measure, and Time.

- I. Association of numbers and value up to 20s. 20s. = two 10s., four 5s., eight 2s. 6d., ten 2s., forty 6d., sixty 4d., eighty 3d., one hundred and twenty 2d., two hundred and forty 1d., four hundred and eighty $\frac{1}{2}$ d., nine hundred and sixty $\frac{1}{4}$ d. pieces.
- II. Association of number and weight up to 1 lb. (16 oz.). 1 lb. = two 8 ozs. or $\frac{1}{2}$ lb., etc.; to be extended same as the above.

III. 1 *Hour* = 60 minutes, subdivided as the above into aliquot parts, $\frac{1}{2}$ hr., $\frac{1}{4}$ hr. = 30 minutes, 15 mins.

NOTE.—Time to be taken as measure of distance; 1 hour walking a distance of 3 miles, etc. This would be useful in planning rough maps, or extended plans of streets, town, and villages round the country.

Walking out of town in different directions measured by the time it takes.

IV. Full knowledge of numbers up to 144, both in addition, subtraction, multiplication, and division.

In measuring, children should draw plans of houses, fields, roads, towns, including length, shape, size, direction of slope, as well as points of the compass.

PRACTICAL HINTS BY H.M.'S INSPECTORS ON ARITHMETIC
(STANDARD II.).

"The failures in Arithmetic in Standard II. are due mainly to an imperfect acquaintance with the multiplication table and defective notation."—MR. LOMAX.

"In Standard II. a disappointed teacher often exclaims that the failing pupils can do much harder sums. The fact is they have been taught to do sums of one special type. It may be they have been taught to expect a certain number of figures, a less number staggers them, and they intercalate a cipher at random to complete the accustomed number."—MR. BALMER.

"Problems of the easiest kind are seldom touched, or if so, only to show the most lamentable want of understanding. I hardly ever hear an Arithmetic lesson given but the same defect is glaringly apparent. The children are taught to calculate, but not to apply, while the very principles on which their

calculations rest remain a hidden mystery to them."—MR. CODD.

"The late Dean Dawes used to make the children mentally calculate the length of the room, or the area of the window, and then verify their calculations by the two foot rule."—MR. WARBURTON.

CHAPTER XI.

CLASS SUBJECTS : SCHEDULE II. (STANDARD II.).

"The Class Subjects should be taught by means of reading-books and oral lessons, illustrated, so far as possible, by maps, diagrams, specimens, and simple experiments."

I. ENGLISH.—*"To repeat forty lines of poetry, and to know their meaning; to point out nouns and verbs."*

II. GEOGRAPHY (see p. 61). *"The size and shape of the world. Geographical terms simply explained, and illustrated by reference to map of England; physical geography of hills and rivers."*

III. ELEMENTARY SCIENCE.—*"A progressive course of simple lessons in some of the following topics adapted to cultivate habits of exact observation, statement, and reasoning."* *"Common objects, such as familiar animals, plants, and substances employed in ordinary life."* (New Code, 1883.)

(See Instructions to Inspectors on Class Subjects.)

ENGLISH.

This subject consists of the repetition of poetry, and the grammar of the noun and verb.

In the selection of the poetry the remarks on Standard I. should be attended to, but the poetry for Standard II.

should be more difficult than that of Standard I., in the nature of the subject, and in the mode of treatment (*Matter and Form*).

It is advisable, though not essential, that the poetry should consist of a single selection, complete in itself. The sentences should not be too involved, and concrete rather than abstract images should be selected. Where possible the poetry should be taken from the reading-book.

The teacher should prepare manuscript notes of explanation and illustration of the poetry selected.

These should contain references to the author of the poetry; the general nature of the subject; explanations of the hard words, and of difficult phrases; the relations of the nouns to the verbs; elucidation of figures of speech, especially the Simile and Metaphor; the spelling of hard words, etc.

As an illustration of these manuscript notes, suppose the poetry selected was—

Robin Redbreast's Secret.

(Crown Reader—Standard II.)

“I’m little Robin Redbreast, sir,
My nest is in the tree,
If you look up in yonder elm
My pleasant home you’ll see.”

(No reference here to author, as the piece is anonymous.)

Subject Matter.

The Robin tells the girls that he has built a nest in the elm tree; but he keeps this a secret from the *boys*, so that they may not know where to find the nest, lest they should rob it. Point out to the class the cruelty of destroying birds’ nests, or taking the young or eggs.

Refer to the pain that they would feel if *their* own home were destroyed, or their brothers and sisters were carried off. Insist that birds have feelings for their young, as keen, if not as lasting, as those of human beings; and inculcate the lesson of kindness to animals generally.

Redbreast.—Why so called? Because of the red colouring on the breast of the bird. Compare this to a red waistcoat.

Secret.—A secret is something we wish to keep to ourselves. We are not obliged to tell everything about our own private life to everybody; and this keeping a secret to ourselves is not like lying, which is trying to *deceive* others. Thus a boy may not have had a very good breakfast, because of the poverty of his parents; but he is not called upon to tell this to all his neighbours. But if he were to tell his friends that he had had a *good* meal, this would be a falsehood. If asked the question, he would have a right to refuse to reply, but none to speak falsely.

I'm.—This is short for *I am*. The Robin himself is supposed to be speaking to the reader, who is called "sir."

Nest.—Point out the uses of birds' nests. These are not, as often supposed, so much for the use of the parent birds, as they are for sheltering the eggs and young from enemies and bad weather. Accordingly, when the family has been reared, the nest is generally abandoned. And even when the eggs are being hatched, and the young protected by the warm wings of the mother bird, the father perches outside of the nest at night.

Point out what beautiful objects birds' nests are in shape, and in the neatness with which they are made. Get, as far as possible, from the children, what nests are made of—clay, mud, twigs, woven grasses, horsehair, moss, and wool; and explain the separate uses of these materials.

Tell the class that each kind of bird chooses a different kind of place for its nest; thus, the skylark builds on the

ground; the linnet in the hedge; the rook in the top of a tall tree (elm), etc. But all nests alike are protected, either by situation or secresy.

Yonder.—The Robin in using this word, is pointing out, as it were, the very elm tree in which he has built his nest.

Elm.—This is a tall, widely branching tree, which attains a great height and size; it generally grows singly in fields or in hedges. It puts forth its leaves very early, long before those of the ash or oak. Its timber is very hard and dark coloured, and is used for making coffins.

You'll = you will; that is, the reader will. What will the reader see?—The home of the Robin.

What must you do before you will see this? You must look up into yonder elm tree—because the tree is tall; and the nest is there.

Grammar of Verse.

NOUNS.—Here the nouns are *Robin Redbreast*, taken together. These two words are like our Christian and surname, and refer to one owner. *Sir*, the address of a person; *nest*, a common noun, or name of something common to a whole class, or lot like itself; *tree*, *elm*, *home* (like nest).

VERBS.—*Am*, *is*, *look*, *will see*. Two of these, *look* and *see*, are words which speak of *doing*; the other two speak of *being*.

RELATIONS OF THE NOUNS AND VERBS.—*Nest* goes with *is*; and so on with the rest of the verses.

Formal Lessons in Grammar.

The teacher will make a great mistake if he limits the Grammar of Standard II. to the bare pointing out of nouns and verbs. Every possible help should be given to the class to distinguish nouns and verbs; and this cannot be

done unless the *nature* of these two parts of speech is taught. There is ample time for this within the twelve months; and this teaching will prepare for the work of Standard III. The following are the points which the teacher should teach in Grammar, Standard II., and separate lessons should be prepared for each—

(1) The *Nature of a Noun*—as the name of a person, place, or thing. Illustrate these.

(2) The names of persons and places are called *proper* nouns, and are spelt with capital letters. Illustrate this.

(3) The *thing* may be a thing noted by the *Senses*, or something which may be either seen, heard, felt, tasted, or smelt. These are mostly *common* nouns. Or it is a thing noted by the *sense*, or understanding, such as sweetness; or something which may be talked about. These are *abstract* nouns. This conception of the abstract noun will be found the most difficult part of the work to explain. Frequent exercises in the reading lesson, and in formal grammar lessons, should be given to distinguish proper, common, and abstract nouns. Thus, a mixed group of all three may be given, and the children required to divide them into columns, headed Proper, Common, and Abstract.

(4) The *use* of the noun may be illustrated by giving a noun to the class, and requiring sentences to be formed with this noun as a part. Or blank sentences may be given, in which the class is to fill up the blank spaces with nouns, as, The — built its nest on a —.

(5) *Number*.—The numbers of nouns are quite simple enough for children to understand; and the test whether a word can be altered from the singular form to the plural, adds another criterion to distinguish a noun.

(6) *Gender*.—The same remark applies to the meaning of masculine, feminine, and neuter.

(7) *Parsing of the Noun*.—This will be found a very

valuable exercise, and should be done after the method below—

Nest.—Common noun; singular number (plural nests); neuter gender.

William.—Proper noun; singular number; masculine gender.

Sweetness.—Abstract noun; singular number; neuter gender.

The abbreviations, sing., no., mas., fem., or neut. gen., may soon be taught.

(8) *Subject*.—Accustom the class at an early date to recognize nouns as subjects or doers of the action of the (transitive) verbs.

(9) *Object*.—The nouns as objects of the action of the (transitive) verb, the relation of the noun to the intransitive verb and the noun as owner or possessive case, can be left to a subsequent stage.

(10) *The Nature of the Verb* as a word speaking of *doing* and *being*.

(11) The meaning of tense or time: present, past, and future.

Many teachers introduce the teaching of the adjective into the work of Standard II., and this is the natural place for it, in conjunction with the noun. Those that chose this mode of treatment can refer to Grammar, Standard III.

The objects of teaching Grammar are—

(1) To train the mind by inductive and deductive reasoning.

By *Inductive* reasoning is meant reasoning from the known to the unknown.

By *Deduction* is meant arguing on "*first principles*," on the reasonableness of rules without reference to facts.

(2) To teach the child to speak and write correctly. Children by constant repetition unconsciously learn the

syntax and inflexions used in speech and writing; but Grammatical Government lays down the *laws* on which these are dependent.

By *Syntax* is meant the rules on which sentences are constructed.

By *Inflexions* are meant the changes which words undergo to express number, gender, tense, etc.

Grammar, more than any other subject, largely consists of classification and definitions. The teacher should therefore have clear ideas of the principles underlying these. The classification should always be a *natural* one (not artificial), and a logical one, without *cross divisions* in which the same subject comes over again under different heads of the classification. Thus, in the following table:—

BAD CLASSIFICATION.

Nouns	{	Proper	...	...	John
		Common	...	...	flock
		Abstract	...	...	abstraction
		Concrete	...	...	flock
		Noun of multitude	...	...	flock

there is cross division, flock may come under three different heads. This shows there are more sub-divisions than are necessary, and violates *one* law of classification, viz. that classification should proceed on the basis of one idea, as below:—

LOGICAL CLASSIFICATION.

(a) Nouns	{	Proper	or	Nouns
		Common	Proper = individuals, Common = classes.	
(b) Nouns	{	Abstract	Things actual or intellectual.	
		Concrete		

It will be seen there are many classifications, according to the notion we seek to illustrate; thus, a tradesman divides men into customers and non-customers. A soldier,

into the service (meaning *his* service) and non-combatants ; schoolmasters, into the profession and those not so ; clerics, into the cloth and the laity. The next law of classification is that the sub-division be sufficient to include all the members of the class, thus :—

Words { Notional
 { Relational

would leave out interjections.

Definition, not the most perfect but the most suitable to the capacity of the child, is to be aimed at. The most perfect definition can only be given and understood when the whole subject has been mastered. The most natural method is first to classify, then to define, *i.e.* first to break up into groups (to classify = to make up into classes), then draw the limits around each group. To define is to lay down the limits. Rules of definition are :—

(1) The definition should be adequate to the classification, excluding none that belong to the class, admitting none from another class, thus :—“An adjective is a word that qualifies a noun,” is inadequate *finally* ; it leaves out the pronoun, and many adjectives do not *qualify*, as *a*, *an*, and *the*.

(2) The definition should itself be clearer than the subject defined.

(3) The definition should never contain one superfluous word. A perfect definition is a crystallization of thought, a *concentration of essence*, an *epitome*. They are thus exceedingly rare, and extremely difficult to make *impromptu*. Definition is used in grammar to mark out the parts of speech and their inflexion (declension and conjugation), and with syntax (as rules of concord).

In defining we must often be satisfied with *approximate* completeness. Thus, it is sufficient to teach a class *at first* that “an adjective is a word which qualifies a noun,” leaving out reference to the pronoun. A common mistake

is to make no distinction between words and things, as when we say gender is the distinction of sex, which it is not in many languages, nor even in our own in the neuter and common. So a preposition is a word used to show the relation between one word and another, and thus to show the relation between one thing (or action) and another; thus, "John is in the boat." Here "in" shows the relation between John and boat.

NOTES OF LESSONS AS MODELS FOR FIRST LESSONS ON PARTS OF SPEECH.

NOUN.—STANDARD II.

INTRODUCTION.—FIRST STAGE.—Pick out easy sentences in Standard II. Reader. Let class point out in these the names of *persons*. Then tell class such words are nouns. Next write sentences on blackboard, with blanks. Let class fill in with nouns, as names of persons. Next let class pick out on *any* page of Reader the names of persons. End this section by telling class such names are *proper*.⁽¹⁾

SECOND STAGE.—Do exactly the same with nouns as names of *places*.⁽²⁾

COMMON NOUNS.—Point out to class that preceding names belong to individuals only, but that there are *classes* of things of which the names are common to all, as a desk = any desk; ⁽³⁾ but we cannot say "a Thomas." Well illustrate this by abundant reference to things around.⁽⁴⁾

METHOD.

- (1) *Distinguish throughout the difference between the thing and the word used as its name.*
- (2) *Give sentences from Reader, the class reading them to educate through the eye. Do so without the book to educate the ear.*
- (3) *Give copious exercises on blackboard.*
- (4) *Definition: A noun is name of a person or place.*

SECOND LESSON ON THE NOUN.

FIRST STAGE : COMMON NOUNS.—Appeal to class to use their *senses*, and show class that all objects of sight, smell, hearing, taste, and feeling, have names which are common nouns. These nouns also group under the nearest relations of child life (and are especially Anglo-Saxon), being terms of the street ; of the kitchen, school, garden, market : terms of kinship, of play, of natural objects in the earth and sky ; of dress, etc.⁽¹⁾

SECOND STAGE : ABSTRACT NOUNS.—These are names of qualities, states, and degrees of qualities, of the common or proper nouns.⁽²⁾ There are no things really existing to which these names are given, we only imagine they exist ; thus, there is no sweetness by itself, as it is only the state or quality of the sweet thing. Sweetness cannot be touched, tasted, etc.⁽³⁾ It will be very difficult to get the class to make these abstractions ; it will help them to present objects, as chalk, and ask for qualities (hardness, whiteness, size, shape, etc.). Here they will be perhaps using the adjective, but this difficulty will disappear in the next lesson.⁽⁴⁾

METHOD.

- (1) *Ask class for names of things in groups, e.g. dogs, etc.*
- (2) *Point out that names ending in ness, tion, ty, and ship, are abstract nouns.*
- (3) *Ask for concrete nouns corresponding to the abstract terms given.*
- (4) *Definition : A noun is a name of objects in classes, or qualities of such.*

FIRST LESSON ON THE ADJECTIVE.

INTRODUCTION.—This is the easiest part of speech. The noun was taken first because so frequent in use, and it is the object which the adjective has to qualify.

FIRST STAGE: SIZE.—Pick out sentences in Reader in which adjectives expressive of size (big, small, etc.) are used. Let class associate these with their nouns. Then write sentences on blackboard with blanks for such, for children to fill in.

SECOND STAGE: NUMBER.—Do the same with adjectives of number (cardinal and ordinal, of course not using these words).

THIRD STAGE: COLOUR.—Do the same as with first and second stages.

FOURTH STAGE: QUALITY.—Do the same as before, choosing first those sentences which have (a) Nouns well known to child; (b) Well-known properties residing in the adjective; (c) Abstract nouns.

METHOD.

Give children nouns vivà voce, and ask for adjectives to them. Do the reverse. Give abstract nouns, and ask for adjectives. Show that adjectives run in couples of opposites, as little, big; good, bad; that is, they are relative terms.

FIRST LESSON ON VERB.

I. INTRODUCTION.—From Reader take a simple sentence with simple subject and intransitive verb. Show that the latter expresses action.

II. Take sentences from Reader with the verb in passive form (transitive verb *to be* and perfect participle), as, John was struck. Show here that verb expresses suffering (not in sense of pain, but of undergoing.)

III. Take sentences with verb *to be* used alone, as, Tom is in the boat. Show here that verb expresses being or existing.

DEFINITION.—A verb = a word to express doing, suffering, or being.

METHOD.

Write sentences on blackboard in each stage to illustrate, given by teacher and by class. Do not venture to explain why you reject the inappropriate sentences given by children. Let children pick out of Reader verbs of being, doing, suffering. Accept in this stage as verbs participles and verbal nouns. Show the class that all words are verbs which go with I, thou, he, we, you, they. Also note that verbs have the notion of time or tense; these last two criteria, though empirical (unscientific rule of thumb), are useful to child.

Inflexions should be taught in the following order :—(1) Number of nouns ; (2) Gender of nouns ; (3) Tenses of verbs ; (4) Comparison of adjectives ; (5) Cases of nouns ; (6) Number, gender, person, and case of pronouns ; (7) Kind, mood, number, and person of verbs. (4)–(7) are for upper classes only.

PRACTICAL HINTS FROM H.M.'S INSPECTORS' REPORTS ON
ENGLISH (STANDARD II.).

"In this subject more than any other, the mistake, which is less excusable here and more fatal, of not laying a good foundation of simple knowledge intelligently grasped has been followed by disastrous results. The subject has been rarely well mastered. It is impossible that it should be mastered if it never becomes a mental exercise to the children. Of very many schools it would not be untrue to say that from Standard II. upwards, they have been engaged in a kind of jugglery which has mystified them.

"It has never been made clear to them that they are dealing with words only ; they think that they are sitting next to nouns in class and holding nouns in their hands, and they do not understand it."—MR. ALLINGTON.

"Some teachers seem able to impart to their scholars some trick by which to pick out nouns, while all the rest of their grammar is futile."—MR. BALMER.

"Grammar requires more exercise of thought and reason than the other class subjects, and is rarely well known."—
MR. JOHNSTONE.

"The choice of passages to be learnt is of the utmost importance, and requires close and intelligent observing of the children."

"That the poetry chosen should have real beauties of expression and feeling, that these beauties should be such as the childrens' hearts and minds can lay hold of, and that a distinct point or centre of beauty and interest should occur within the limits of the passage learnt, all these are conditions to be insisted on. Some of the short pieces by Mrs. Hemans, such as 'The Graves of a Household,' 'The Homes of England,' 'The Better Land,' are to be recommended, because they fulfil all three conditions—they have real merits of expression and sentiment, the merits are such as the children can feel, and the centre of interest, these pieces being so short, necessarily occurs within the limits of what is learnt."—

MR. ARNOLD.

CHAPTER XII.

CLASS SUBJECTS (STANDARD II.)—*Continued.*

"The Size and Shape of the World."—The most difficult part of this subject is to get the children to understand that the earth is a ball moving in space. To overcome this difficulty, reference should be made (1) to the Sun and Moon; (2) The children should be taken on an imaginary flight in a balloon, far above the clouds with the earth becoming smaller and smaller.

Comparison may then be made to an orange with a knitting needle run through it to represent the axis; but it must be pointed out that there are no *real* projecting poles; and that the flattening at the poles (of which a great deal too much is made) is much less on the earth than on the orange. The pimples of the orange will represent mountains (isolated).

It should be pointed out that to a small insect on a large ball, the latter would appear flat, as the earth does for the same reason to us.

To give notions of the earth's *size*, it should be pointed out that the measurement round a ball (*circumference*) is about three times that through the centre (*diameter*). This can be tested by passing the tape round a school globe, and comparing the length with the height of the globe. These globes can be bought in *papier maché* from 1s.; but the "portable globe," is much better. This gives the earth's

measurement as about 24,000 and 8,000 miles respectively, in circumference and diameter; and these will be sufficiently accurate for Standard II.—at any rate for the first lessons.

A small boat may be made with a mast in it. As this is passed over the globe, the class notes that the top of the mast is first seen on approaching towards the class, and *vice versâ*. This will illustrate a ship at sea approaching to, or receding from, the land; with its well known lesson.

Geographical Terms.—To illustrate these, the teacher should use a shallow box before the class. Clay may be moulded in this, to represent land-masses; while silver sand may be made to represent water (seas, lakes, rivers). This gives adequate conceptions (which the children should be taught to express in their own simple language), of islands, promontories, etc.

Instead of *verbal* definitions intelligent teaching should be given. Thus, instead of teaching that "an island is a piece of land entirely surrounded by water," suggest a boat going all round a piece of land.

A peninsula should be introduced as a piece of land reaching out into the sea; and so on.

The human body will suggest many geographical comparisons; thus the nose represent a cape; the open mouth a bay; the neck an isthmus; the arms, peninsulas; etc.

Myers' cheap *papier maché* relief maps are very useful in a school. But the best of all illustrations are natural ones, and those nearest at hand, and within the actual knowledge and experience of a child. Thus the double slope of the roof of a house suggests the real meaning of a watershed, as a water-divider; rain running down a gutter explains a river; a pond is a lake in miniature; and rocks in it are suggestive of islands.

Lastly, these points are referred to the map of England; and here actual names of islands, etc., should not be with-

held. Thus the Thames, at least, should be known as a river; the Pennine chain and Cumbrian group, for mountains; the Atlantic Ocean, North Sea, English Channel, Strait of Dover, for pieces of water; the lakes of Cumberland, etc., (collectively) for inland sheets of water; the Forelands for capes, and the Nore, Mersey, and Humber, for estuaries; while the Wash may stand for a bay.

Physical Geography of Hills.—Nearly every school has a neighbouring elevation. This, and a church or other high building, should be used as a standard of reference for the measurement of other heights.

After single elevations should come ranges (chains) and groups, with explanation of valleys.

Physical Geography of Rivers.—These should be taken in their common, but not universal, natural connection, as springing or rising from hills or mountains. The full meaning of a river will take several lessons to teach. The points to be particularly attended to are—*Source, Course, Watershed, Feeder, Delta, Estuary, Mouth, Right and Left Banks.*

A special lesson should be given as below on—

THE SOURCES OF RIVERS.

- I. MOUNTAINS AND HILLS.—Snows melt and rains fall on mountains, sink through sand, gravel, etc., until they come to rocks like clay, etc., which will not allow water to pass through. The water then runs off the top of these beds, and comes to the surface on the slope or at the base of the mountains. This is the origin of some springs, from which rivers take their rise.
- II. SOURCE LAKES.—Sometimes the waters supplying a river are furnished directly by a lake. In these cases the river is the natural outlet for the waters,

these coming from springs and disappearing in evaporation, or by means of the river's overflow.

III. MARSHES.—Not seldom rivers rise in very low lands, flooded at rainy seasons. Sometimes two rivers flowing in opposite directions rise in one marsh. Many of the rivers in the south of England rise in the plain between the North and South Downs, and flow between the Downs themselves, through the soft chalk of which they have eaten a passage.

IV. GLACIERS.—Other rivers rise in glaciers, which are like frozen rivers in certain mountain districts. These glaciers are fed from snows above, and melt into water at their lower extremities, giving rise at once to other considerable streams. As a consequence the waters are extremely cold.

Another very useful subject for a lesson on Geography in this standard is the TERMINATIONS OF RIVERS. The *heads* alone of this subject will be given, viz.—

- I. *By mouths in the Ocean, or Sea.*
- II. *Flowing into another River (Feeder).*
- III. *Flowing into Recipient Lakes.*
- IV. *Drying up in deserts.*
- V. *Disappearing over waterfalls, or beneath the ground.*

(The technical terms Recipient, etc., are given for the benefit of the teacher, who, of course, will not employ them with the class.)

The *Uses* of rivers may be similarly indicated in the heads of a good lesson, viz.:—

- I. *To carry off rains and prevent flooding.*
- II. *To irrigate the land, especially in hot countries.*
- III. *For purposes of Trade and Commerce.* Point out—
 - (a) That modern commercial cities are generally situated near the heads of estuaries, *e.g.* London, as the tides rising and falling supply cheap motive power for transport.

- (b) That rivers open the way into the *interior* of countries for inland trade.
- (c) That the value of a river depends more on its slow current and absence of waterfalls, than on its size.
- IV. *To serve as boundaries* of countries, counties, etc.
- V. *For water supply* to large towns.

NOTES OF LESSON ON SPRINGS.

- I. SURFACE SPRINGS.—Part of rainfall absorbed readily if soil be dry or porous ⁽¹⁾—sand, gravel, sandstone, chalk; soil soon becomes saturated. Rest sinks until encounters hard rock or clay; these absorb water but slowly, hence downward course arrested; follows slope of beds till they are cut by valley ⁽²⁾ or other depression; spring runs out at foot. Found only in districts with gently inclined and unbroken beds.
- II. DEEP SPRINGS.—Some rocks have not uniform slope; water collects in hollow. If well be sunk or bore-hole made, ⁽³⁾ water will rush up, height depending on water-level; ⁽⁴⁾ (Artesian) wells, cliff-springs, ⁽⁵⁾ by seashore. Spring may be many miles from source of supply.
- III. INTERMITTENT SPRINGS.—Sometimes rock, chiefly limestone, ⁽⁶⁾ contains cavity drained by passage; ⁽⁷⁾ rain has first to fill hole to level of top of opening. Having begun to flow, will continue until water has fallen below level of opening; spring will then cease to flow till water reaches former level. ⁽⁸⁾

METHOD.

- (1) *Why "dry," why "porous" ? Explain "porous."*
- (2) *What made valley ?*

- (⁵) *Explain method of boring.*
- (⁶) *Refer to school cistern—fountain.*
- (⁷) *Explain by diagrams.*
- (⁸) *Why limestone is selected for illustration?*
- (⁹) *Explain siphon and action.*
- (¹⁰) *Show other streams may be periodic.*

The young teacher should exercise his invention in framing on the above models a good lesson on Water-sheds.

It is thought that the above will be sufficient indications now for the Geography of Standard II., as there are so many good Geographical Readers ably dealing with the subject.

SYLLABUS OF LESSONS.

The following Scheme of Geography Lessons, Standard II., has been worked out in a mixed school of 750 children, marked "*Excellent*":—

- (1) Plan of schoolroom and surroundings.
- (2) Plan of main streets in town.
- (3) Plan of town and surroundings.
- (4) Plan of county and surroundings.
- (5) Rapid recapitulation of lessons 1 to 4. Deduce comparative sizes of counties.
- (6) Size and shape of earth.
- (7) Recapitulation of 4, introducing and explaining all geographical terms.
- (8) Map of England.—Coast line; Geographical terms.
- (9) Map of England.—By reference to this illustrate *inland* geographical terms omitted in 7.
- (10) Map of England.—Parts of salt water named and defined.
- (11) Evaporation.—Fully illustrated by special lesson; clouds.

(12) Condensation.—Rain and Snow—explained in lesson.

(13) Causes of condensation.

(14) Recapitulate 12 and 13, introducing uses of mountains.

(15) Complete uses of mountains; formation of ditto.

(16) Division into chains, groups, ranges, etc., illustrated by reference to map of England.

(17) *Definitions*—Mountains, *e.g.* as in 16, and crest, ridge, foot, base, spur, pass, valley, vale, dale, dell, glen, gorge, volcano, crater, hills.

(18) Recapitulate 15, and streams, brooks, rivers, feeder, confluence, rapids, waterfall, cascade.

(19) Complete river, *i.e.* include source, banks, bed, current, course, channel, river basin, water parting, delta.

(20) Recapitulate 18 and 19, dealing thoroughly and completely with a river and its uses. Illustrate by Yorkshire Ouse, Trent, and Thames in England; by Wye and Severn in Wales.

(21) Recapitulation of evaporation and condensation, showing how that although sea constantly receives water it never overflows.

These Lessons to form bases of home lessons on days when given.

PRACTICAL HINTS FROM H.M.'S INSPECTORS' REPORTS ON GEOGRAPHY (STANDARD II.).

“The right sort of globe would be one without names, and with the land all one colour, and the water another, and with the latitude and longitude lines distinctly marked. Very good globes have been constructed by teachers out of large india-rubber balls, the land being painted, and the natural colour of the ball being left for the sea. Mountains and rivers

are unnecessary, as they can be learnt from the maps of the different countries or continents; names are useless, and prevent the globes from being used for testing the children's knowledge."—MR. BAILEY.

"Children who can define a mountain or river, and name numerous examples, are (often) unable to point out either on a map. It is highly desirable that schools should be furnished with two sets of maps, one with, and the other without names. The latter are an invaluable adjunct to examination."—MR. BALMER.

"The best teaching power of the school should as much as possible be brought to bear upon Geography; and in teaching it the importance of an intelligent and familiar acquaintance with the map should be steadily kept in view."—MR. FUSSELL.

"There is too little descriptive and pictorial teaching, too meagre a knowledge of the subject on the part of the teachers themselves, and, above all, too little use of local illustrations."—MR. SYNGE.

"Ability to sketch rapidly and correctly on the blackboard would aid the progressive teaching of Geography by a more natural method than at present prevails. The examples would, in addition, help the scholars in their own efforts on the slates."—MR. H. WILSON.

ELEMENTARY SCIENCE (STANDARD II.).

The teaching in this standard should make a large demand on the thinking powers of the children.

In the Animal Group children should be led to compare and classify the different animals, and to notice the chief differences and resemblances between the leading divisions of the animal kingdom. The children should also have

explained to them the preparation, qualities, and uses of animal substances employed in the Arts, such as leather, silk, wool, and horn.

In the Vegetable Group such distinctions as that of endogen and exogen should be made clear; the gradual growth of plants such as beans and wheat should be traced; the uses of vegetable substances, such as cotton, linen, starch, sugar, coffee, tea, and india-rubber, with the processes of manufacture, should be explained.

In the Mineral Group attention should be called to the general properties of metals, iron, copper, silver, gold, lead, tin, zinc, mercury, etc., and the qualities peculiar to each. The iron and steel manufactures, and the making of brick, pottery, earthenware, etc., may be explained; and the distillation of coal and manufacture of gas, may be experimentally illustrated.

A graphic oral lesson requires constant acquisition of fresh matter, rearrangement of plan, thoughtful preparation of illustrations or experiments, as well as a copious choice of language, and a readiness of adaptability to difficulties that may arise in the course of a lesson for which no preparation can be made.

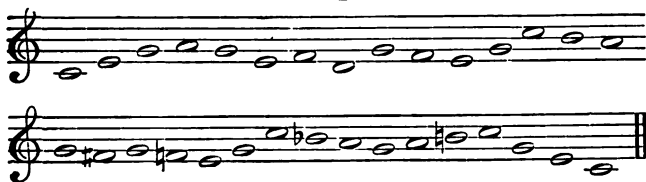
SINGING.—PART I.—STAFF NOTATION.

Division 3 (Standards II. and III.).

Note Test.—(1) To sing slowly as directed by the Examiner's pointer, using the sol-fa syllables, a series of notes in the key of C, containing an F sharp contradicted by an F natural, and a B flat contradicted by a B natural. The F sharp should be approached by the note G and return to G as in the example, and the B should

be approached by C, and be followed by A as in the example.

Example.



Time Test.—(2 a) To sing on one sound to the syllable “laa” an exercise in $\frac{4}{4}$ or $\frac{3}{4}$ time, containing semi-breves, minims, crotchets, and quavers, with dotted minims, and rests on non-accented portions of the bar.

Example.



(2 b) Or, to say rhythmically the value names of the same notes as before explained. (See Division II., Time Test (2 b)).

Ear Test.—(3) To repeat and afterwards give the names of any consecutive *three* notes of the scale of C which the Examiner may first sing to the syllable *laa*, or play *twice* after having sung or played the whole scale of C.

Example. (Children.)

(By Examiner.)

(Twice) *Sol, Fa, Mi.*

(The above test should only be applied to the more advanced children of this division.)

Song Test.—(4) To sing in unison, or in two parts, if preferred, in good time and tune, and with due expression, a school song or round (set to words) previously prepared.

PART II.—TONIC SOL-FA.

Division 3.

Note Test (Modulator).—(1 a) To sol-fa from the Examiner's pointing on the modulator, or from dictation, in any key, simple passages in the major diatonic scale, including *fe* and *ta* in stepwise progression, used thus: *s fe s—d' ta l.*

Example.

d m s l s m f r s f m s d' t l s f e s f m s d' ta l s l t d' s m d

Note Test (written or printed).—(1 b) To sol-fa at sight a written or printed exercise, including the notes of the *Doh* chord in any order, and any other notes of the major diatonic scale in stepwise succession. The exercise not to contain any difficulties of time.

Example.

{ | d : d | m : r | d : m | s : f | m : s | l : s | l : t | d' : — ||

Time Test.—(2) To sing on one sound to the syllable

"*laa*" an exercise in three-pulse or four-pulse measure, containing one-pulse notes, half-pulse notes, and whole pulse rests on the non-accented pulses of the measure.

Examples.

{ | 1 : 1 | 1 : 1 | 1 : 1 . 1 | 1 : 1 | 1 : 1 | 1 : - } ||

{ | 1 : 1 : | 1 : 1 . 1 | 1 : 1 | 1 : 1 | 1 : 1 | 1 : - | - : - ||

{ | 1 : - : 1 | 1 : 1 : 1 | 1 : 1 . 1 : 1 | 1 : - : - } ||

{ | 1 : : | 1 : : 1 | 1 : : 1 | 1 : - : - ||

Ear Test.—(3) To imitate to "*laa*," and afterwards give the names of, the tones of the scale in stepwise succession, which the Examiner may first sing or play *twice*—after having sung or played the chord of the key note.

Example.—Examiner sings *d m s d' s m d*. Then to "*laa*" he sings *s f m, s f m*. The children then repeat to "*laa*," and afterwards give the sol-fa names.

(The above test should only be applied to the more advanced children of this division.)

Song Test.—(4) To sing in unison, or in parts, if preferred, in good time and tune, and with due expression, a school song or round (set to words) previously prepared.

N.B.—By the Education Department's Circular, the children of Standard II. will be required to pass the tests placed in this scheme for Standard III.

STANDARD II.

(Scheme continued from p. 81.)

"Tune.

"(1) To sing the chord of 'Soh,' in connection with that of 'Doh' as directed in the exercises of the school charts.

"(2) To sing simple modulator exercises, introducing all the tones of the major diatonic scale.

"(3) To sing from dictation a simple phrase or passage.

"(4) To sing similar exercises from the manual signs.

"(5) *Ear Tests.*—To tell any tone of the scale on hearing it sung twice to 'laa,' the chord of the tonic having been sung.

"Time.

"(1) To sing on one tone, 'laa,' in correct time, an exercise in two, three, or four-pulse measure, containing only whole pulse notes and their continuations, half-pulse notes, and whole pulse rests on the non-accented pulses of the measure.

"(2) To read a similar exercise in time. By reading in time is meant, that the sol-fa names of the note should be said, giving to each its proper duration of time.

"Time and Tune.

"(1) To sing any of the Exercises 1 to 20 of the school charts in correct time and tune.

"(2) To sing in correct time and tune a similar exercise from the blackboard, the time having been first learnt.

"(3) To sing in unison, or in parts if preferred, in good time and tune, and with due expression, five school songs.

"Voice Training."

- "(1) Exercises as in Standard I., in keys C, D, and E flat.
"(2) Soft singing and clear pronunciation of words should be insisted on."

NEEDLEWORK (STANDARD II.).

(Continuation of Instructions, p. 71.)

- (1) *To fix for stitching, and work not less than half of 5 inches, and sew on a string.*
- (2) *To cast on 30 loops and knit with 4 pins 10 rounds, breaking and joining the cotton or wool at least once, and cast off.*
- (3) *To darn on canvas 10 rows $1\frac{1}{2}$ inches long, and to mark one of the following letters:—E, H, I, L, O, T, and to work 3 inches of herring-bone.*

Optional.—To herring-bone down the four sides of a piece of flannel 4 inches square.

Material required.

- (1) *A piece of calico 5 inches by $2\frac{1}{2}$, and a piece of tape 2 inches long.*
- (2) *A set of 4 knitting-pins and cotton or wool.*
- (3) *A piece of canvas 4 inches square.*

Optional.—A piece of flannel 4 inches square.

The fixing and working of a seam and fell as taught in Standard I., is again required in this Standard, with the addition that a "join" shall be shown in both seam and fell. Each child being supplied with two pieces of calico of equal size (5 inches by $2\frac{1}{2}$), the teacher should question the class on the method of procedure, as previously taught; and having seen that each step is well remembered, and competently performed, she should allow the class

to commence seaming with coloured cotton. After a few stitches have been worked, the teacher should direct each child to break its cotton off. As in the case of joining when hemming, an end of about half an inch is required; therefore, should the cotton break off close to the work, about three and a half stitches must be unpicked so as to obtain an end. The *half stitch* unpicked in seaming, as in hemming, enables the fresh cotton to be very neatly joined on. The teacher should now direct the class to watch her narrowly; and taking up her own specimen piece (no teacher should be without a demonstration piece when teaching needlework), she should place her needle *between* the two edges that she is sewing, but for the first stitch take her needle only through the edge nearest to herself, leaving an end of cotton about half an inch long. These two ends should be carefully *sewn in*, not *tucked* between the two pieces.

The teacher should direct the children to seam a few stitches more, and then make them repeat the process of *breaking and joining* until the difficulty has been overcome, and neatness in joining secured. The joining of cotton in a fell should be performed exactly as in hemming.

KNITTING.—“Purling” is introduced with the knitting of this Standard. After the children have cast on their stitches, and worked one row plain, they might be told to slip the first stitch, keeping the cotton in front of the right-hand needle, which should be placed through each stitch in turn of the left-hand needle, in exactly the opposite position of that of plain knitting. The cotton should be thrown *over the top* of the right-hand needle in working each stitch, not *under* it, as is frequently the case with beginners. After “purling” is well understood by the class, a piece of knitting—ribbed, purl, and plain—could be taught.

The “optional” work of Standard II. is pleating. This exercise should, of course, like fixing a hem and a seam

and fell, be first practised on paper. The teacher and children should each be supplied with two pieces, one being about 7 inches by 3, the other 3 inches square.

The teacher might question the class as to what garments are pleated, and then draw from them the use of pleats. The teacher should take up the larger piece of the two and measure it exactly in half, marking the half by a few stitches, then take up the smaller piece, and mark it in the same way, and allow the children to do the same. The teacher should explain to the class the reason of this step. The teacher should then show the children how to fold each pleat quite evenly, and allow them to place a pin in each, until they have ascertained that the half pleated is the same length as half of the band. The band might then be turned down all round, and the ends of it tacked. The pleats should next be run across the top a little way from the edge, the pins removed, and the piece tacked into the band. The other half should be pleated in the same way. The children might then be allowed to have material, and directed to proceed step by step as when using paper. After the band has been hemmed on the right side, it should be tacked down, and hemmed on the wrong side, exactly on the line of stitches made when hemming on the right side.

After the children can perfectly perform this exercise, aprons and chemise bands could be nicely put on by them.

CHAPTER XIII.

STANDARD III.

SCHEDULE I. (NEW CODE, 1883).

READING.—“*To read a passage from a more advanced reading-book, or from stories from English History.*”

WRITING.—“*Six lines from one of the reading-books of the Standard, slowly read once and then dictated.*”

“*Copy-books (capitals and figures, large and small hand) to be shown.*”

“*In Standard III., and those above it, the examination should always be on paper. Greater readiness should be expected in writing, but two or three words only should be dictated at once. As a rule, more than four errors in Spelling should involve failure, but if the handwriting be very fair, and not more than four errors occur in the six lines, the child should pass. Correct spelling should not in any case obtain a pass if the writing is below fair.*” (Instructions to Inspectors.)

ARITHMETIC.—“*The former rules, with long division; addition and subtraction of money.*”

“*In Standard III. and upwards the Arithmetic must be on paper.*” (New Code, 1883.)

“*In Mental Arithmetic practice should be given in Standard III. in easy reductions.*” (Instructions to Inspectors.)

READING (STANDARD III.). (See pp. 9 and 87.)

Little will require to be specially added to the remarks on Reading in Standard II., except so far as History is concerned. The History Reader will form the *third* book required in the Standard.

This subject is now amply provided for in the many History Readers (see Griffith and Farran's "History Reader," 1s.) now published. Before this subject can be properly taught, however, even from a historical reading-book, the teacher must have a fuller knowledge of the subject for illustration, than is contained in the book used by the class. Moreover, as the subject demands more fixed attention from the child, than is the case in an ordinary reading-book, the lessons should be specially prepared and written out in the form of Notes for blackboard and oral practice. These collective lessons should be designed to illustrate and fill up the sketches in the history reading-book.

As an example of this we shall subsequently append some Notes of Lessons on history subjects in Standard IV.

SUMMARY AND SUGGESTIONS.

In teaching History to young children of Standard III. the teacher should bear the following points in mind:—

(1) No dates or strict chronology need be attempted; but the events narrated should be in sequence.

(2) The History of England is not strictly the history of English *kings*, but of the English *people*.

(3) Manners and customs, dress, industries, the condition of the country and people, institution of laws, and biographies of great and good men, are of more importance than the birth and death, marriage and issue, wars and struggles, of kings.

(4) The matter should be presented to the children in a lively, pictorial, graphic form ; so as to cultivate emotions, promote the love of liberty and obedience, and emulation of noble self-denying deeds.

(5) The subject should be illustrated, where possible, with simple ballads, as specimens of which the following are appended :—

THE ANCIENT BRITONS.

Deep in the native forest stood,
Under the oak and pine tree tall,
The Britons' clustering huts of wood,
Surrounded by a ditch and wall.

The stealthy cat and savage boar,
The cunning fox and wild red deer
Prowled round the huts ; and evermore
The eagle's scream resounded near.

The beaver plunged in the river near,
The wild fowl settled on the fen ;
As yet they felt no touch of fear,
Nor cause to dread the sight of men.

A solemn feast the Britons hold
Beneath the branches of the oak ;
The Druid cuts the mistletoe,
And fells two bulls with sturdy stroke.

But what is yonder figure vast,
From which resounds that piercing cry ?
In that strange tower imprisoned fast
The prisoners by flames will die.

The captives taken in the war,
And those who mourn o'er their defeat,
Are hither borne by the swift car,
And here a fiery death await.

Dark is the gloom within the wood,
Within the mind 'tis darker still !
The air reeks with the scent of blood,
And children's cries the forests fill.

But soon will come a brighter day,
The town will rise where grows the tree,
And knowledge bring its cheering ray
To make a people strong and free.

H. M.

THE LADY HILDA.

The Lady Hilda sat in her bower,
Her head upon her hand ;
Her lot was one of wealth and power—
The mistress of the land.

Yet sadness hung upon her cheek,
And dimmed her drooping eye ;
She felt, though royal, she was weak,
And hated cruelty.

For men raged round her, fierce and bold,
Their hearts untouched by love ;
They lived and died—and no one told
Of Him who lives above.

So Hilda left her royal bower,
And sped to Whitby's shore,
And there she built a lofty tower,
Above the ocean's roar.

And here she read, and worked, and taught,
And made her people blest ;
She healed their bodies, freed their thought,
Then went unto her rest.

Across the darkness of the night
That covered all the land,
Her life shone like a beacon-light
That gleams upon the strand ;

Like some lone star with trembling ray,
When all around is dark,
That ushers in the rising day
With one faint, tiny spark.

H. M.

CARADOC.

PART I.

Free on the rugged hillside stood
The British chieftain like a rock ;
Before him, rushed the rolling flood,
Around him subjects flock ;
On either hand his warrior band
Awaits the spoiler of the land.

From mountain, cave, and forest's gloom,
And from the sounding shore,
His painted warriors have come
To cope with Roman power ;
The fierce red light of baffled might
Gleams from their aching, straining sight.

Upon the confines of the plain
Where all was lost before,
Their eager patriot gaze they strain
Beyond the river's shore,
Where reedy bank gives back the clank
Resounding from the mail-clad rank.

The serried host the stream has crossed ;
It mounts the steep hillside.
Awake, awake ! or ye are lost !
Behold the rising tide
Encircles now the mountain brow ;
O chieftain, where art thou ?

Here, where thou wast in days long past,
The first to meet the foe,
Looms through the mist thy figure vast—
I see, I see thee now ;

The lightning brand within thy hand
Defends again thy native land.

But naked valour strives in vain !
The discipline of Rome,
That conquered on the level plain,
Now gains thy mountain home.
Rome will not be denied by thee,
And e'en thy stoutest warriors flee.

PART II.

Chained to the victor's car,
The victim of the war
Through Rome's high streets is led !
Yet through the rabble rout,
Heedless of gibe or shout,
He rears his lofty head.

No tear-drop falls to greet
The victim's bleeding feet—
That stain is stain of blood !
He staggers up the hill,
All resolute of will,
And of a changeless mood.

Yet o'er his eyeballs swims
A vision that half dims
His sight with unshed tears ;
He stands where once he stood
Beside the rolling flood—
That day of sighs and fears.

But when his gaze he turned,
His mighty spirit yearned
That such a city proud
Should envy his poor lot
And humble British cot ;
And thus he spake aloud :

“ Can such magnificence
As strikes my aching sense
Another victim crave ?
Is not your triumph full,
O thirst insatiable,
Without an exile’s grave ? ”

No wreath adorns thy brow,
But yet to me ’tis thou
That standest victor there !
And not the swelling breast,
Wrapped in its purple vest,
Within the regal chair.

He that can conquer fate
Regardless of estate,
And great by suffering,
He only shall be famed,
He only truly named,
As worthy to be king.

H. M.

THE BATTLE OF HASTINGS.

Two hosts are met on battle plain,
Beside “ the silver sea,”
To pour their blood, like summer rain,
In deadly rivalry.

The morn shines bright, the waters gleam,
The tide of war rolls by,
And sweeps along, a mighty stream
Of armed panoply.

In solemn pomp and circumstance,
Beneath their leaders’ eyes ;
With trumpets’ blare and horses’ prance—
A kingdom for the prize.

From North and South in dread array,
The sacred stream to spill ;
How many thrill with life to-day,
That never more shall thrill !

With battle-axe and javelin ;
With shaft, and sword, and spear ;
In morning sun, and deafening din,
The rival hosts draw near.

Behind the trench on yonder mound,
See Saxon Harold stand ;
His standard planted in the ground,
His battle-axe in hand.

And there, upon his warrior steed,
The Norman Duke appears ;
Before him sweep in phalanx deep,
The moving woods of spears.

The air grows dark, the foes beneath,
In struggle fierce and high,
Exchange the blows that deal out death,
In changeful victory.

One moment turns the battle's tide
Against the Norman foe ;
The next one sees the Saxon pride
Upon the earth fall low.

"The duke is slain ; the day is lost,"
Breaks forth the startled cry.
"See, I am here," rings through the host,
"To conquer or to die !"

Half mad, half blind, the Saxon king,
By deadly arrow struck,
The centre of a warrior ring,
Withstands the battle shock.

But faint with loss of blood, and spent
With changing blows, his gaze
To native earth and sky is bent,
Beneath the sun's last rays.

The last that ever he will see,
For ere 'tis day again,
Old England is no longer free,
The victor holds the plain.

If ever wrong beat down the right,
'Twas in that strife of blood ;
But out of darkness cometh light,
The ill precedes the good.

Ages, since then, have mingled race,
And blended creed and tongue ;
To fearless strength have added grace,
And humanized the strong.

Saxon or Norman we may be,
But English one and all,
To keep our own old England free,
And with her rise or fall.

H. M.

HOW TO TEACH HISTORY, AND ITS OBJECTS.

The objects aimed at in teaching history are—

- (1) To cultivate the spirit of patriotism.
- (2) To train affections by stories of heroes famous for their deeds of generosity, bravery, self-denial, perseverance, faithfulness, and fortitude.
- (3) In later stages children will learn from history the practical wisdom of daily life by studying the *motives* which determine action.

The history and geography of a country are so bound up together, that one cannot be well taught without teaching the other.

To teach history properly requires on the part of the teacher—

- (1) Careful preparation.

- (2) A lively imagination.
- (3) A quick eye to seize striking situations.
- (4) A graphic style of expression to picture an event in simple language.
- (5) Quick emotion to catch for one's self and impart to others, love of good and disgust for evil.

Tales of vulgar bloodshed and murder should be avoided, as injurious to sensitive organizations.

On the other hand, special attention should be paid to pictures of the state of the country, means of conveyance, character of trade and pursuits, maritime enterprise, changes of dress, food, houses, furniture, etc.

CHAPTER XIV.

ARITHMETIC (STANDARD III.).

[FOR WRITING (STANDARD III.), see Standard II.]

IN teaching long division, the first point to establish is, that the principle involved is the same as in short division. Thus, in $9)6874$ we have

$$\overline{763} + 7$$

nines in 68, 7 and carry 5 ; nines in 57, 6 and carry 3 ; nines in 34, 3 and carry 7.

This might be done by long division, thus : nines in 68, 7 and carry 5, and so on as before to the end.

Copious exercises should be given in long division with numbers under 13, until the class becomes habituated to the *form* conventionally adopted.

The children will thus get to see that the difference between long and short division consists in the multiplying the divisor by the individual figures of the quotient and setting the product beneath the remainders brought down.

In short division this process is carried on *mentally*, in long division the result is set down in *figures*. The convenience of this arrangement is perceived, when divisors

$$\begin{array}{r} 9)6874(763 \\ \underline{63} \\ 57 \\ \underline{54} \\ 34 \\ \underline{27} \\ 7 \end{array}$$

larger than 12 are used; as seen in the accompanying example.

The difficulty in these examples is to find a true trial quotient figure. It is this which makes the learning of long division so tedious and uninteresting a process. Sometimes the number hit on in the quotient is too *small*; sometimes too *great*. In the former case a remainder larger than the divisor, and in the second no remainder at all, is left. The class must be taught that in the former case a larger quotient figure must be chosen; and in the latter, that a smaller one must be used.

$$\begin{array}{r}
 16 \overline{)1876(117} \\
 \underline{16} \\
 27 \\
 \underline{16} \\
 116 \\
 \underline{112} \\
 4
 \end{array}$$

For some time the children should be allowed to *prove* their working, by the reverse process of multiplying the quotient by the divisor, adding in the remainder to get the dividend.

Another quick way of proving a long division sum, and very useful in testing additional exercises given to the quicker children, is the following:—

In the preceding exercise the following lines added together will give the original dividend. At first, these lines may be singled out and added together, as in the margin; after a little practice, the teacher will be able to add them together at sight in the working without removing them from the other lines. A little observation will show which are the lines selected for addition, viz. the several products with the final remainder.

It would be mere waste of space to lay out the work in further detail, as it is to be presumed that Pupil Teachers know the mechanical rules.

In Compound Addition, the plan referred to in Standard I. will be found of great use, in enabling the teacher to set

additional examples to the quicker children, and telling the result at sight.

	£	s.	d.	
(1)	456	16	$4\frac{1}{2}$	} Any sum set down at random.
(2)	543	3	$7\frac{1}{2}$	
(3)	27	12	2	} A line to make 0's with preceding.
(4)	972	7	10	
	101	2	1	} Same as (1)
	21	2	3	
				} Same as (2)
				} Proof line.
				} Ditto.

£2122 4 4 Answer told at sight.

Another rapid way of setting and testing additional exercises is the following:—See preceding exercise, lines (1) to (4). Number the children 1, 2, 3, 4. Give to the corresponding children all the lines in the sum except the last. To 1 give the last line in addition; to 2 give the half of 1's last line; and to 3 the half of 2's last line; and to 4 the half of 3's last line. Add up 1's sum, subtract the last line of 2's sum from 1's answer, which will be 2's answer; and so on.

In these compound rules the values of figures do not increase from right to left by *tens*, as in ordinary decimal Arithmetic; but each column (£ s. d.) has a value of its own, compared with that to the right and left of it.

As an easy exercise to accustom the class to the *form* required, it will be well to give sums which require no carrying, except in the £'s column, as in the accompanying example.

	£	s.	d.
In Compound Subtraction, the borrowing	23	2	1
has to be done, not by tens, but of a penny	3	2	$3\frac{1}{2}$
for the farthings' column, a shilling for the	16	11	$4\frac{1}{4}$
pence, and a pound for the shillings' column.	£42	15	$8\frac{1}{4}$

In all these rules copious problems should be given.

The following exercises in Mental Arithmetic will serve as types of the kinds of problems, among others, that will be found useful in Standard III :—

Compound Addition.

I. Add at sight—

<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>
2	5	and	2	11		6	8½	and	13	7
2	11	„	3	10		8	1½	„	16	7½
2	6	„	3	6		9	1½	„	18	11½
3	5	„	4	7		12	6½	„	17	6½
5	11	„	7	1		19	11½	„	18	10
8	7	„	9	1		18	10½	„	12	9½
4	8½	„	5	4		16	8½	„	13	7½
2	7½	„	5	4		4	10½	„	13	9½
8	8½	„	7	6½		18	9½	„	6	11½
3	9½	„	6	10½		9	7½	„	11	11½
7	11½	„	7	10½		12	9½	„	12	11½
8	1½	„	9	10½		14	9½	„	15	7½

II. Add at sight—

£	<i>s.</i>	<i>d.</i>		£	<i>s.</i>	<i>d.</i>		£	<i>s.</i>	<i>d.</i>		£	<i>s.</i>	<i>d.</i>
6	11	2	and	3	11	6		6	11	7½	and	0	4	11½
7	9	2	„	16	11	9		9	3	2½	„	0	19	6
13	11	0½	„	11	12	6½		10	11	2½	„	0	18	6½
6	11	10½	„	12	7	9½		13	7	9½	„	0	11	6½
3	16	7½	„	13	2	6½		6	18	6½	„	1	17	2½

Compound Subtraction.

III. From half-sovereign take at sight—

<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>
4	6		5	6		7	3		6	8
7	9		3	10½		5	4½		6	11½
9	10½		8	11½		3	6½		7	9½

IV. From a sovereign take at sight—

<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
9	6	8	6½	3	4½	17	6½
8	3½	9	6½	11	11½	12	6½
13	7½	14	8½	15	9½	16	7½
17	9½	18	11½	13	3½	15	11½

V. I owe £67 16s. 11½*d.* and pay 12s. 9½*d.* : what remains?

If I owe you £6 11s. 7½*d.*, and you owe me £3 19s. 5*d.*, what is the balance?

How much greater is £17 9s. 7½*d.* than 18s. 6½*d.*?

What is the difference between £60 11s. 7½*d.* and £51 17s. 2*d.*?

After paying 11s. 11½*d.*, what will remain out of a £5 note?

How much is £4 17s. 6*d.* short of £11 19s. 8½*d.*?

A cow is worth £17 9s. 6½*d.*, and a horse £18 11s. 6½*d.* : what is the horse worth more than the cow?

Give me change out of a £10 note, after paying £9 7s. 6½*d.*

I borrow £87 6s. 6½*d.*, and pay £13 11s. 2½*d.* : what do I still owe?

My income is £11 18s. 6*d.*, and my expenses £10 19s. 2*d.* : what can I save?

Whatsum added to £17 6s. 1½*d.* will make £96 11s. 2½*d.*?

Two men gain £45 17s. 6*d.*; one draws £13 11s. 6*d.* : what does the other draw?

Which is greater, and by how much, £17 11s. 6½*d.* or £19 11s. 3½*d.*?

Pay a bill of £17 16s. 11½*d.* out of a £20 note.

How much short of £50 is £17 19s. 11½*d.*?

£31 10s. 6*d.* + £42 11s. 1*d.* - £31 0s. 6*d.*

£6 11s. 7*d.* - £5 8s. 4*d.* + £3 18s. 6*d.*

£17 11s. 3½*d.* + £3 - £5 2s. 7½*d.*

£50 + £30 - £70 + 45s.

360 guineas - £360.

450 guineas + £450.

PRACTICAL HINTS BY H.M.'S INSPECTORS ON WRITING AND
ARITHMETIC (STANDARD III.).

"The copy-books used by the upper standards are seldom ruled for large hand, it being thought, especially by parents, that there is something degrading for the older children to be exercised in writing large hand copies, whereas it is well known that one of the chief means by which a mastery over and freedom with the pen are acquired is by constantly writing large hand copies. The ability to write a good large hand is not easily acquired, but when once it is so, writing well in any hand almost necessarily follows."

"It would be well if the Pupil Teachers were required once or twice a week to construct sums for themselves, without having recourse to either cards or books, and to work them carefully out before giving them to the class. This, combined with the explanation of principles involved, would greatly benefit both the class and their teacher, besides adding considerably to the liveliness of the lesson."—MR. BLANDFORD.

"It often happens that an easy problem in compound addition, if it involves but two lines of figures, is treated as a subtraction sum, for no other reason than that subtraction sums consist of two lines."—MR. BALMER.

"In the Third Standard it is still not uncommon for children (particularly girls) to endeavour to take a greater sum of money from a less, simply because the less amount comes first in the question given, or will have in a long division sum a remainder greater than the divisor."—MR. CAMPBELL.

"From the Third Standard upwards I always set one simple problem application of the arithmetical rules supposed to have been learned; and I do not find this

question now more fatal to our examinees than any of the other three."—MR. DU PORT.

"Simple problems, such as the following, have puzzled many in the Third Standard:—Two books contain, the one 5012 lines, the other 9304; if a boy read 98 lines a day, in how many days will he be able to finish the reading of these books?"—MR. FUSSELL.

CHAPTER XV.

SCHEDULE II.: CLASS SUBJECTS (STANDARD III.).

ENGLISH.—“*To recite with intelligence and expression sixty lines of poetry, and to know their meaning; to point out nouns, verbs, adjectives, adverbs, and personal pronouns, and to form simple sentences containing them.*” (New Code, 1883.)

“*The extracts should be simple enough to be pleasing and intelligible to children, yet, in Standard III. and upwards, sufficiently advanced to furnish material for thought and explanation, to improve the taste, and to add to the scholar's store of words. In testing the memory lesson it may suffice to call on a few of the children—not less than one-fourth in each class—to recite each a few lines in succession, and occasionally it may be useful to require the verses to be written down from recollection.*”

“*From the first, the teaching of English should be supplemented by simple exercises in composition; e.g. when a word is defined, the scholar should be called on to use it in a sentence of his own; when a grammatical principle is explained, he should be asked to frame a sentence showing how it is applied; and examples of the way in which adjectives are formed from nouns, or nouns from verbs, by the addition of syllables, should be supplied or selected by the scholars themselves. Mere instruction in the terminology of grammar, unless followed up by*

practical exercises in the use of language, yields very unsatisfactory results." (Instructions to Inspectors.)

GEOGRAPHY.—"*Physical and Political Geography of England, with special knowledge of the district in which the school is situated.*" (New Code, 1883.)

(For Elementary Science, see previous Standard.)

ENGLISH.

The following remarks by Professor Whitney, on the essentials of Grammar, will be found useful to the young teacher:—

"Among the first essentials in the study of English Grammar is the distinction of the Parts of Speech. If that is not learned, and with a living, practically workable knowledge, then nothing is learned.

"There is, of course, no way of giving this knowledge except along with the analysis—or, as it may be better called, the synthesis—of the sentence. That all speech is made up of sentences; that the parts of speech are constituent parts of the sentence, each having its own office, each recognizable and definable *only by that office*,—these are the first truths of Grammar.

"The distinction of the noun and verb, as the two essential constituents of the bare sentence, the one naming something, the other asserting something about it, is the basis of the first classification.

"This can be brought out and impressed only in connection with examples of the bare sentence, and with definition of its parts, the "subject" and the "predicate." These words, so dreaded by many grammarians, and shunned and deferred till far on in the study, I should not hesitate to bring in rather at the very outset. They are, to be sure, hard and ugly terms, yet really no harder than

pronoun and adjective, if taken hold of as early and made familiar; and they are quite indispensable.

“Having the nucleus of the sentence well understood, it is easy to go on and teach the other parts of speech and their offices; the substitute for the nouns (pronouns), the two kinds of qualifying words (adjective and adverb), and the two connecting words (preposition and conjunction), and with such clearness as to cause them to be thoroughly comprehended. Dealing as we do with a known and familiar language, we can accomplish all this before we proceed to take up the several parts of speech themselves for a *more detailed* treatment.”

We think that the above indicates the true lines to be adopted in teaching Grammar in Standard III. In this, as in all other respects, the Code requirements are the *minimum* of the Government, not the *maximum* of the teacher's possibility. In no other way can the noun, pronoun, etc., be properly understood except in connection with the preposition; while the teaching of the conjunction is a matter of the merest simplicity.

GEOGRAPHY (STANDARD III.).

This will be mainly based either on the Geographical Reader, or on oral lessons used instead; or the latter can be still more usefully conjoined with the former.

The more difficult part has been already done in Standard II.; the geography of England will require memory rather than reasoning power.

A good plan would be to first give half a dozen *conversations* on the Map of England. These would bring out (in no logical sequence) facts to be afterwards arranged in order in the minds of the class. Thus the seas and channels around the country, and the relations of England to Scot-

land, Ireland, and France, should be pointed out; then some of the more prominent capes, estuaries, and islands. The meaning of the colours, as marking counties, should be explained; the positions and names of some of the great mountain ranges, a few of the rivers, etc.

After this, the *Physical Geography* of England can be taken up systematically. This should begin with the mountain systems, as on these depend the configuration of the land, and the drainage by rivers. In teaching the Physical Geography, it is best to use a physical map, to supplement this with blackboard sketches, {and outline maps published by Sonnenschein, and to allow the class to draw outlined sketch maps on their slates and exercise-books.

Another section would be the river basins, separated by watersheds; and to show the class that the country consists of the sum total of these. In connection with the rivers, the towns situated on them should be taken.

The lake system next follows in order.

The division into counties, and grouping of these into six northern, etc., should subsequently be taken up.

A special subject is given by the coal-fields of the country, and another by the manufacturing towns taken in groups, so far as can be, as the woollen manufactures, etc.

The seaports—naval, commercial, and “watering”—also form a group of lesson subjects; as well as the great trunk lines of railway proceeding out of London.

Last of all should come the coast-line.

In taking up the geography of the special county, the teacher should start from the school as a centre, and build up the geography from this point synthetically. If the county has a river in it, the valley and watersheds should be well learned, and the physical geography of the county illustrated by it.

The special industries and history of the county should be learnt in more detail than that of the country generally ; but history should be well associated with the geography throughout.

Map drawing of the country and county should be encouraged. This is an exercise which the children enjoy, and it improves neatness, strengthens patience and accuracy, and is a powerful help in fixing situations of towns, etc., upon the memory.

Until recently the teaching of "Geography" consisted too much in the mere learning by rote lists of capes, etc., taken in order from a map ; the text-books were mere dry bones. At the present time there is a tendency of the writers of some Geographical Readers to make the subject more pleasant than instructive ; reasoning and information are sacrificed to pictorial illustration, and the "text" is written up to the publishers' previously existing plates, rather than the illustrations made auxiliary to the main purpose of the subject.

The new regulations ought to be a great inducement to Head Mistresses of Girls' Schools to take up this subject, so much neglected in Girls' Schools, for there is no other which will so increase the intelligence of the school.

COLLECTIVE LESSONS ON GEOGRAPHY (STANDARD III.).

(Continuation of Scheme in Standard II.)

- (1) The county.—Position, and physical features.
- (2) Industries, climate, towns, landmarks of former conquerors, in the county.
- (3) Internal communications of county, railways, etc. ; relative positions of chief places.
- (4) River basins, and drainage of the county.

(5) Northumberland and Durham.—Physical features, industries, towns, products.

(6) Cumberland and Westmoreland.—Physical features, industries, towns, products.

(7) Lancashire and Yorkshire.—Physical features, industries, towns, products.

(8) Internal communications of six northern counties; recapitulating.

(9) The Dee.—Physical features, industries, products, towns, of Cheshire.

(10) Severn basin.—Counties, physical features, towns, products.

(11) Counties in Wales.—Physical features.

(12) Industries of Welsh counties.

(13) Internal communications of Wales.

(14) Thames basin.—Physical features, counties.

(15) Industries, towns, products, internal communications in 14.

(16) Great Ouse basin.—Counties, physical features.

(17) Industries, towns, products, internal communications in 16.

(18) Norfolk, Suffolk, and Essex.—Physical features, industries, towns, internal communications.

(19) Lincolnshire.—Physical features, industries, towns, internal communications.

(20) Hants and Dorset.—Physical features, industries, towns, internal communications.

(21) Devonshire and Cornwall.—Physical features, industries, products, towns, etc.

(22) Eastern coast-line.—Peculiarities.

(23) Southern counties and coast-line.—Peculiarities.

(24) Western coast-line.—Peculiarities.

(25) Railway journeys.—County town to London, Hull, Liverpool, Newcastle, Manchester, Yarmouth, Brighton, etc.

PRACTICAL HINTS BY H.M.'S INSPECTORS IN REPORTS ON
GEOGRAPHY (STANDARD III.).

"The examination of a Girls' School where Geography is wholly omitted, is a curious experience. The girls seem like machines; they can do certain things well,—read, write, spell, cypher, sew, draw, and parse,—but of any acquaintance with the world around them they do not show a trace. The weak point in the Geography has been that the work of each year is allowed to be forgotten in subsequent years. Whatever has been once learnt should be gone over again from time to time, so that it may become fixed in the children's minds and be remembered in after life."—MR. BAILEY.

"Geography widens the sympathies, enlarges the area of mental vision, quickens the power of observation, cultivates memory, and affords to curiosity abundant interest and amusement."—MR. DU PORT.

"Map drawing from memory is a valuable exercise, and should be attempted in all Standards above the Second."—MR. FISHER.

"In some Girls' Schools Geography is intelligently taught, and the girls answer briskly and well. It used to be a prevalent superstition that girls could learn Grammar but not Geography, but this is now refuted by facts."—MR. SYNGE.

SINGING (STANDARD III.).

Same Government requirements as in preceding Standard.

Continuation of Mr. Watkins' Scheme.

"Tune.

"(1) To sing the chord of 'Fah' in connection with those of 'Doh' and 'Soh,' as directed in the exercises of the school charts.

"(2) To sing from the teacher's pointing on the modulator, an exercise including all the tones of the major diatonic scale, together with *fe* and *ta* in stepwise succession, thus: *s fe s—d' ta l*.

"(3) To sing similar exercises from dictation and the manual signs.

"(4) To pitch the key-tone in keys C, D, E, F, G, A, B, with the aid of a tuning-fork.

"(5) *Ear Tests*.—To imitate to '*laa*,' and afterwards give the names of the tones of the scale in stepwise succession, which the teacher may first sing twice, the chord of the key-note having been sung.

"Time.

"(1) To sing on one tone, '*laa*,' an exercise in two, three, or four-pulse measure, containing whole pulse notes, half-pulse notes, and whole pulse rests on the non-accented pulses of the measure.

"(2) To read in time, as in Standard II., a similar exercise.

"Time and Tune.

"(1) To sing in correct time and tune any of the exercises 1 to 26 of the school charts, or a similar one from the blackboard, the time being taken first, then the tune.

"(2) Introduce two-part singing, and be able to sing the easy two-part exercises of school charts. As an introduction to two-part singing, divide the class into two parts, let both parts sing '*doh*,' then direct one part to sing '*me*,' the other part holding on the '*doh*.' Do this in other keys, and with other tones of the scale.

"(3) To sing in unison or in parts in good time and tune, and with due expression, five school songs.

"Voice Training.

"(1) Exercises, as in Standard I., in keys D, E flat, and E.

"(2) Teach the scale exercises in these keys to syllable 'ah,' the teacher noticing carefully any faults in the production of tones, such as coarseness, breathiness, etc."

CHAPTER XVI.

SCHEDULE I. (STANDARD IV.).

READING—"To read a few lines from a reading-book or *History of England*."

[Three sets of readers are required for this Standard, of which one *must* be a History Reader, and another *may* be a Geographical or Scientific Reader.]

WRITING—"Eight lines of poetry or prose, slowly read once, and then dictated." "Copybooks to be shown." (New Code, 1883.)

"In Standard IV. and those above it, writing should be running, free, and symmetrical, as well as legible and clear. If poetry is selected for dictation, the scholars should be made clearly to understand before beginning to write where each line commences and ends. A pass should not be withheld if the writing is fair, and the errors in spelling do not exceed three." (Instructions to Inspectors.)

ARITHMETIC.—"Compound rules (money) and reduction of common weights and measures; viz. *avoirdupois* weight, long, liquid, time, square, and cubical measure." (New Code, 1883.)

"You will probably continue the usual practice of setting in all Standards above the First, four sums, of which not more than one should be a problem, and of

permitting a scholar to pass who has two correct answers. Right method and arrangement, and good figures, may excuse slight error in one of the answers."

"In Standard IV. Mental Arithmetic should be given in simple exercises in fractions, founded on the multiplication table, and in the aliquot parts of £1, of a yard, and of a pound avoirdupois." (Instructions to Inspectors.)

READING (STANDARD IV.).

The poetical extracts in the reading-books should be principally depended on for the cultivation of *expression*; and the prose extracts for *accuracy* of pronunciation.

The *Grammar* should now be still more closely associated with the reading lesson, the difficult constructions being pulled to pieces and explained; and the more abnormal uses of words taught, as well as difficult spellings.

EMPHASIS.—Under the head of "*English*" it may be pointed out that analysis of simple sentences should always accompany the parsing of Standard IV.

But this analysis should be kept in sight by the teacher in the *reading* lesson. Manifestly no understanding or expression can be secured, unless the child knows, whether under their names or not, which are the subject, predicate, and object (if any) of a sentence.

It is these that will determine the emphasis, while, as a rule, the attributes of the subject, and the extension of the predicate, will be less required to be brought prominently forward by the stress of the voice.

Another rule in emphasis is to lay stress where *contrast*, *opposition*, *antithesis*, are suggested or expressed by the writer; as, "He told me he was innocent; but I did not believe him." These oppositions will be generally introduced

in a second half of a statement, preceded by adversative conjunctions, or phrases, such as *but*, *on the other hand*, *notwithstanding*, etc.

In poetry there is always one, sometimes there are two, words in each line, which require the emphasis to bring out the meaning; thus

“*To be or not to be, that is the question.*”

“*I came to bury Cæsar, not to praise him.*”

EXPRESSION.—In dialogue, each separate speaker should have his own utterances expressed in a tone distinct from that of the others. To cultivate expression, small, complete poetical pictures should be referred to and learnt, such as Kingsley’s “Three Fishers;” and the *similarities of construction* in the separate stanzas should be pointed out, as on these depend so much of the felicity of the passages.

These extracts should, of course, be prepared beforehand by the teacher, as their proper rendering requires dramatic and elocutionary power of considerable order. Elocutionary power does not mean “*rant*.”

Before the passage can be properly rendered, the *inversions* must be explained, and simple paraphrasing should be made use of.

Another point in good reading and correct dictation exercises is punctuation.

PUNCTUATION.—The marks for punctuation and their use are given in the grammar-books, and in a condensed form below; but besides these rules to attend to, there is a *pause of sense* unmarked by the printer.

Thus in—

“On every nerve
The deadly winter seizes,”

we ought to slightly pause at “*nerve*,” although no comma is expressed, in order to make the object of the sentence stand out in relief. Similarly, other parts of a sentence require separating from the whole.

Punctuation Marks.

The Comma, ,	Note of Exclamation, or Admira-
The Semicolon, ;	tion, !
The Colon, :	The Parenthesis, ()
The Period, or Full Stop, .	The Apostrophe, '
The Dash, —	Hyphen, or Conjoiner, -
Note of Interrogation, ?	The Asterisk, or Star, *

The Comma (,) marks a slight pause in reading.

The Semicolon (;) denotes a greater break in the thought of the writer.

The Colon (:) breaks up the sentence into more distinct groups.

The Period (.) divides the paragraph into complete sentences.

The Dash (—) marks interruption of thought.

The Note of Interrogation (?) indicates that the sentence to which it is put asks a question; as, "What is the meaning of that assertion?" "What am I to do?"

The Note of Exclamation or of Admiration (!) indicates surprise, pleasure, or sorrow, or other sudden emotion; as, "Oh!" "Ah!" "Goodness!" "Beautiful!" "I am astonished!"

The Parenthesis, (), is used to prevent confusion by the introduction in a sentence of a passage not necessary to the sense thereof: "I am going to meet Mr. Smith (though I am no admirer of him) on Wednesday next."

The Apostrophe (') is used to indicate the Possessive Case—as John's book; or to show the omission of parts of words, as Glo'ster, for Gloucester; tho' for though.

The Hyphen (-) is used to unite words which, though they are separate, have so close a connection as almost to become one word, as water-rat, wind-mill, etc. It is also used at the end of a line, to show where a word is divided and continued in the next line.

Hints on Spelling.

(1) Words of one syllable ending in *l*, with a single vowel before it, have double *l* at the close; as, *mill*, *sell*.

(2) Words of one syllable ending in *l*, with a double vowel before it, have one *l* only at the close; as, *mail*, *sail*.

(3) Words of one syllable ending in *l*, when compounded, retain but one *l* each; as, *fulfil*, *skilful*.

(4) Words of more than one syllable ending in *l* have one *l* only at the close; as, *delightful*, *faithful*; except *befall*, *downfall*, *recall*, *unwell*, etc.

(5) All derivatives from words ending in *l* have one *l* only: as, *equality*, from *equal*; *fulness*, from *full*; unless they end in *er* or *ly*; as, *mill*, *mill*er; *full*, *fully*.

(6) Participles in *ing* from verbs ending in *e* lose the *e* final; as, *have*, *having*; *amuse*, *amusing*; unless they come from verbs ending in double *e*, and then they retain both; as, *see*, *seeing*; *agree*, *agreeing*. (Singeing is exceptional.)

(7) Adverbs in *ly*, and nouns in *ment*, retain the *e* final of the primitives; as, *brave*, *bravely*; *refine*, *refinement*; except *acknowledgment*, *judgment*, etc.

(8) Derivatives from words ending in *er* retain the *e* before the *r*; as, *refer*, *reference*; except *hindrance*, from *hinder*; *remembrance*, from *remember*; *disastrous*, from *disaster*; *monstrous*, from *monster*; *wondrous*, from *wonder*; *cumbrous*, from *cumber*, etc.

(9) Compound words, with double *l*, retain their primitive parts entire; as, *mill-stone*; except *always*, *also*, *although*, *almost*.

(10) One-syllables ending in a consonant, with a single vowel before it, double that consonant in derivatives; as, *sin*, *sinner*; *ship*, *shipping*; *big*, *bigger*; *glad*, *gladder*, etc.

(11) One-syllables ending in a consonant, with a double

vowel before it, do not double the consonant in derivatives ; as, *sleep, sleepy ; troop, trooper*.

(12) Words of more than one syllable ending in a single consonant, preceded by a single vowel, and accented on the last syllable, double that consonant in derivatives ; as, *commit, committee ; compel, compelled ; appal, appalling ; distil, distiller*.

(13) Nouns of one syllable ending in *y*, preceded by a consonant, change *y* into *ies* in the plural ; and verbs ending in *y*, preceded by a consonant, change *y* into *ies* in the third person singular of the present tense, and into *ied* in the past tense and past participle ; as, *fly, flies ; apply, applies ; reply, replied*. If the *y* be preceded by a vowel, this rule is not applicable ; as, *key, keys ; play, plays ; enjoy, enjoyed*.

HISTORY.

In this stage the Historical Reader will be more consecutive and detailed ; and in most cases will commence at the Norman Conquest.

The earliest "history" of a country is in great part fable and myth, *e.g.* the legends of Dunstan, Arthur, and Robin Hood. The old heroes often become gods, *e.g.* Woden and Thor, and these become fabulous by lapse of time, "They loom vast through the mist of ages." These myths may contain good lessons, and were written or handed down in times nearer the events and persons than our own.

The early history of a country is like its physical history, one prominent mountain peak after another is thrust above the general level of the deep, but these are discontinuous for a long time. Thus, until 1066 it is best to give children only isolated facts in history, without trying to connect these. Prominent among these should be—

- I. Roman Conquest.
- II. Saxon Conquest.
- III. Danish Invasion.
- IV. Norman Conquest.
- V. Biographies of leading and good men and women ;
such as Boadicea, Caractacus, Hilda, Cædmon,
Bede, Arthur, Alfred, Augustine.

Besides these conquests and biographies, retrospects should be made of the state of the country about B.C. 55, A.D. 410, 788, 1066, etc.

There is always danger in teaching history by reigns, that we miss the prevailing character of the period. Thus, as an example, from 1066 to 1485, a great struggle was fought out between the crown and the barons (the people, at first ignored, slowly acquired a little power in the period); this struggle began with the peculiar feudal system of William I., and ended in a victory of the crown, consequent on the Wars of the Roses. In the latter part of the period, artillery had also reduced the power of the barons' castles. Meanwhile the people obtained a little power in the reign of Henry III., when Simon de Montfort called together popular representatives, but the *common* people had no voice in the election, and the representatives disliked their work; but the French wars, making subsidies necessary, gave the people the power of the purse, which they sold for reforms. Again, the *Magna Charta*, and the great Charter of Forests, gave the people *some* power.

During this period also the Normans and Saxons became fused together; this was largely brought about by the following facts :—

- (1) The Saxons became the rank and file in the Crusades, and so came in contact with the Norman officers; hence after Richard I. the old bitterness disappeared.
- (2) The Saxon had prevailed over the Norman speech,

so that in 1362 the Statute of Pleading allowed *English* to be used in law courts, and men no longer could say, "Ef Jock wud be a gentilmun he mun speke Frensch." As Normandy was lost to England, the Normans in England took up English sympathies and even antipathies against the Normans in France, up to the point of even fighting against them.

During this period also a Saxon literature had sprung up. At first there were few original Saxon writers, but translations and imitations prevailed, chiefly from the French and Italian, viz. minstrelsy and romances from the Provincial and the Languedoc. The leading writers in this literary history were Chaucer and Wycliffe; the one in his "*Canterbury Tales*," racy, humorous, quaint, graphic, picturesque, moving, realistic, giving us states of life and personal sketches of knights and millers, etc., at the time; the other's work was the translation of the whole Bible into English. This book fixed the language of the day, but there were only manuscript copies, and these very dear.

This great maritime nation had not as yet done much in the way of commerce, though springing from Norse and Saxon sea-kings; but in 1213, at the battle of Damme, the first flash of naval prowess bursts forth, in which English sailors win the day.

From 1485-1688.—(1) In this period take note of the increasing tyranny of the crown, Tudor and Stuart being synonymous with regal domination; but the system broke down in the time of the Commonwealth.

(2) The rise of the new learning took place in this period, Aristotle gave place to Bacon and physics. At the same time the Greeks were expelled from Constantinople, 1453, and came to Western Europe and England.

(3) The discoveries in East and West; Drake's voyage round the world; colonial settlements in Virginia and

Pennsylvania; growth of English navy; defeat of Spanish Armada; naval victories over Dutch.

(4) The rapid rise of large commercial towns, viz. Bristol, London, and beginning of Liverpool (Macaulay).

(5) Reformation. It is true this had been begun by Wycliffe, but a hiatus occurred till about 1534, when Henry VIII. was declared supreme head of the English Church, after the contention about Henry VIII.'s divorce; the dissolution of the monasteries, 1536-1539; the setting up of an English and banishing of the Roman ritual; the translation of the Bible.

These great tendencies and outbreaks should be traced out in detail without reference to reigns.

The period from 1688-1883, is marked by the following tendencies:—

(1) Growing *power of the Parliament*, leading up to the Reform Bills of 1832 and 1867, and to the union of Scotland, 1707, and Ireland, 1801.

(2) Increasing *religious toleration*. The Restoration brought in cruel intolerance in the Act of Uniformity. Five Mile Act, Conventicle Act, etc.; these had to be removed one after the other.

James II. was a Roman Catholic; the people rose against this, and many restrictions against Roman Catholics were laid down. This went on till 1829, when the Emancipation Act was passed under threat of Revolution. Admission of Jews to Parliament followed.

(3) Increasing *scientific discoveries*, especially physical: steam-engines, telegraph; spread of education; penny postage; colonies in Australia, New Zealand, and the Cape; independence of United States; spread of commerce; new gold discoveries (California and Australia); national debt; newspapers.

The teacher should note what may be called the law of continuity. In history, as in physical science, each event

is linked to others preceding and succeeding; hence "history repeats itself."

What history has to teach, and the use of it, might be illustrated in English history, which accounts for—

(1) England, a great maritime, colonial, and commercial empire.

(2) Its government free, intelligent, and stable.

(3) Equal laws.

(4) Pure and characteristic literature, and compound language.

(5) A race compounded of several elements (Celtic, Teutonic, etc.).

The teacher will note that history is subject to laws among which the following are the most remarkable:—

(1) "Tyranny begets revolution, revolution begets anarchy, and anarchy begets tyranny;" *e.g.* this is the history of the old Greek Republics—the *tyrant*, in the primitive good sense of the word (as liberator, saviour) overthrows despotism; but the tyrant, being irresponsible, becomes a tyrant (in the modern sense of the word); thence follows oppression.

(2) Religious reformations precede political, and these precede social reforms; the Reformation in the time of Henry VIII. freed men's minds to turn to political reformation under Charles I., leading up, in 1832, to sanitary and educational reforms. This is illustrated in miniature in the Education Act, 1870. First came the "religious difficulty;" next the struggle at elections of boards of Liberals and Conservatives; lately the question has been, who can best do the work?

(3) Men sow the wind and reap the whirlwind, *e.g.* in the conquest of Ireland.

(4) Law. The people become more and more powerful as education progresses, but there are occasional jerkings in the political machine when popular tumults and factions

arise. "Vox populi" is not always in history "Vox dei;" *vide* the people's cry, 1751, "Give us back our eleven days."

These laws being thus fixed, men have foretold the historical future, and Coleridge even has told us how to do so.

The following teaching notes will furnish material for good Notes of Lessons on the Anglo-Saxons, and all the Notes of Lessons should be prepared from similar teaching notes collected from the teacher's own reading.

PREPARATION NOTES OF LESSONS ON ANGLO-SAXONS.

GOVERNMENT.—To the Saxons the Englishman owes his independence of mind, veracity, respect for woman, perseverance, love of order, combined with personal liberty and the origin of the most valuable of his political institutions.

ANGLO-SAXON INSTITUTIONS.

I. RANKS OF PERSONS.—(1) *The King*.—He was considered as one of the people, and chosen on account of his fitness for office; but the royal authority seems to have been confined to the royal race. The title of queen was conferred upon the king's wife, till Eadburgha, Queen of Wessex, forfeited it. In early times there was a Bretwalda, of ruler of Britain, over the rest. The king was commander of the army, was commonly considered the fountain of justice and honour, and had the power of granting pardons. He summoned the Witan, who advised and assisted him in making laws, and in the government. His revenue was raised from his share of the lands annexed to the crown, taxes on foreign commerce, tolls, and fines. His life was considered of special value, and his word taken without oath.

(2) *Eldermen or Earls*.—These were great landed proprietors, sub-governors of a district, shire, or number of counties; answering to our lord-lieutenants. They led their men to battle, and presided along with the bishops over the courts of justice. Under them there was a shire-reeve, corresponding to our sheriff, who saw to the execution of the law, levied fines, etc. [The judges are even now attended by the sheriff of the county.]

(3) *Thanes*.—These were nobles of lower rank, having not less than five hides of land (600 acres), held for three generations; or those who had made three commercial voyages across the sea at their own

risk. They were of two grades—king's thanes and a lower grade—and were sometimes magistrates.

(4) *Ceorls, or Churls*.—These were husbandmen, traders, artisans, or inhabitants of towns; they were the lowest class of freemen, but could become thanes.

(5) *Theowes, or Slaves*.—They were the lowest order of the people, and were of two classes—those born in bondage or captives in war, and persons arrested for debt or crime. They might become freemen by their master's bounty, by his ill-usage, or by buying their freedom.

(6) *Clergy, or Teachers*.—These were the educated class, and on that account honoured; they had great power, and ranked with the great landholders.

II. DIVISIONS OF LAND.—(1) *Tithing*.—A district occupied by ten free families.

(2) *Hundred*.—A hundred tithings grouped together for local self-government.

(3) *Shire*.—A larger division made up of hundreds under a shire-reeve, or sheriff.

(4) A number of shires grouped together made up a little kingdom, subject to the reigning king.

There were two kinds of land, *folcland* and *bocland*. *Folcland* was land common to the whole people; *bocland* was land held by book or charter (freehold), with the consent of the king and Witenagemot. All landholders were liable to military service, repairs of bridges, highways, walls, and fortresses, and other public burdens.

III. TOWNS.—The larger towns were divided into wards; were in a great measure self-governed, and elected either a part or the whole of their officers. Their chief magistrate was their town-reeve, or bailiff, who had the same power in the town as the sheriff had in the county.

IV. COURTS OF JUSTICE.—(1) *The Hall-mote*, for tithings or townships, was held in the hall of the lord's residence.

(2) *The Hundred-mote*, held once a month, for civil and criminal causes.

(3) *The Shire-mote*, or County Court, which met twice a year, was the principal court for civil, criminal, and ecclesiastical business. It was presided over by the bishop, and the earl, or his deputy, the sheriff.

(4) *The Witenagemot*, or "meeting of wise men," the great council of the nation, consisted of the king, bishops, abbots, earls, thanes, and aldermen of shires. It met regularly at Christmas, Easter, and Whitsuntide, or when specially summoned by the king.

It was the highest court of justice. It had the power of electing and deposing the king; of advising and assisting him in the making of laws, and in the main acts of his government [*e.g.* Alfred submitted his laws to the Witan for their approval. Ethelred pledged himself to rule better before reascending the throne]. It had the power of making alliances and treaties, and settling their terms.

Along with the king, it appointed bishops to vacant sees, and had power over ecclesiastical matters, as revenues, festivals, fasts, etc. The king and Witan levied taxes, raised land and sea forces as occasion required; had power over all tenure of land, and superintended the courts of justice.

V. MODES OF TRIAL.—(1) *By Compurgators*.—Generally twelve neighbours as witnesses to character, selected by the individual prisoner, or by the earl, as the case might be. Their oaths were estimated by the taker's standing, according to the Saxon scale of persons, e.g. an earl's oath being worth six ceorls', and so on. If the accused produced the required number of witnesses as to his innocence, he was set free; if not, he was pronounced guilty.

(2) *Trials by Ordeal*.—There were three different kinds, viz. the *hot water*, the *hot iron*, and the *corsned*. The prisoner prepared himself for three days by fasting, prayer, and taking the sacrament. The trial then proceeded under the superintendence of the clergy, and accompanied by their prayers.

In the *hot water* ordeal, the prisoner had to plunge his arm up to the wrist, or his arm to the elbow, according to the offence, into a cistern of boiling water.

In the *hot iron* ordeal, the prisoner was required to carry a piece of red-hot iron a distance of three yards. In both cases the priest wrapped up the hand or arm in a piece of clean linen, and if healed within three days the prisoner was pronounced innocent.

The *corsned* was a piece of bread, which the prisoner took, with an imprecation that it might choke him if guilty. If he ate it freely without damage he was considered innocent.

These trials to us seem somewhat singular, and no doubt they were subject to great abuse; but the Saxons believed Providence would interfere so as to secure a just decision. They chiefly punished by fines, called *were-gold* or *man-bote*. Each personal injury and every man's life had its legal value, according to the nature of the offence and the rank of the injured person. They had also the punishments of slavery and death. Criminals might offer bail for their appearance, and also for their good behaviour, which might be taken or refused; and each hundred was responsible for the conduct of its members.

VI. OCCUPATIONS.—(1) *Agriculture, etc.*—Rearing cattle, sheep, swine (fed on oak and beech nuts), bees, etc. Products: wheat, oats, rye, barley (made into ale), apples, pears, grapes, nuts, etc. The lands belonging to the monasteries were cultivated; but there were immense forests, lakes, ponds, marshes, and moors unreclaimed.

(2) *Trades*.—Architects, carpenters, millers, bakers, dyers, weavers, farmers, shoemakers, saddlers, glass-makers, and smiths (who made implements, weapons, articles of jewellery, etc.). The clergy engaged in trades; Dunstan was a smith, sculptor, painter, and musician. Numbers of the people were employed in fishing in rivers, lakes, and seas.

THE BATTLE OF HASTINGS.

The circumstances which led to this famous battle were foreshadowed in the reign of Edward the Confessor, who had spent a large part of his early life at the Norman court, and on his accession to the throne he showed himself very partial to Norman courtiers and customs.

Armed remonstrance against this by the Saxons finally proved ineffectual. By the death of Godwin—the most powerful of all the Saxon earls—the Norman favourites kept their ascendancy over the mind of Edward.

Having no family, Edward foresaw that at his death a disputed succession would occur. To prevent this he sent for his nephew, Edward, son of Edmund Ironside, who died shortly after his arrival. Then the king looked about for a fresh heir. The son of the deceased Ironside—Edgar Atheling—was too young to wield the sceptre. Edward disliked the son of Godwin—Harold—because of his Saxon proclivities. He turned his eyes to Normandy, and saw in his friend Duke William, the man most fitted to succeed him. Harold was therefore sent to the Norman court to convey the king's bequest and a pledge of a ring and sword. From Harold opposition was naturally expected; so William, arranging the time and circumstances, compelled Harold to swear an oath not to offer opposition to him, and even to give up all castles then occupied by Norman soldiery. From a sense of his position, Harold took the oath. William promised on his part to give him in marriage his daughter Adela, and his protection. On Harold's return to England he ingratiated himself into Edward's favour so far, that, according to some, the king appointed him his successor.

On Edward's death, Harold was at once elected king by the Witan. When William heard of this, he sent an embassy charging him with breaking his oath, and demanding an instant resignation of the crown. Harold's answer was the immediate expulsion of all Normans. William prepared for war. Messengers were sent to different parts of France and Germany to summon soldiers. "Good pay and broad lands to every one who will serve Duke William with spear, with sword and bow," was the cry from the Channel to the Rhine. Knight, robber-baron, spearman, and archer quickly flocked to William, and in 1066 he had ready 60,000 men, camped at Dives, near where Trouville now stands. To convey this army, William built or collected a fleet of 400 ships and 1000 transports. A Saxon fleet was on the alert during the time William was preparing his army; but shortness of provisions compelled it to put into Sandwich. Hence the way was open, and William soon took advantage of the chance.

On September 27th, the Normans crossed the Channel, and landed unopposed in Sussex, near Winchelsea. William personally superintended the landing, and was the last to disembark. As he gaily

stepped ashore he fell ; this was regarded as an unlucky omen by the spectators ; but, seizing a handful of sand, he exclaimed, " I have thus taken seisin (possession) of this land ; and so far as it reaches, by the splendour of God, it is yours and mine."

The army encamped at Hastings, and cavalry scoured the country near. An entrenched camp and two wooden castles (outworks) were formed.

Meanwhile Harold had not been idle. A fleet was manned and an army assembled. On the day of the Norman invasion, Harold was at York, resting his followers after the bloody defeat of Tosti and Hardrada ; there the evil news reached him. By forced marches he arrived in London, where he stayed six days, and received reinforcements. His brother, Earl Gurth, counselled him to prolong the war till winter, when the Normans would be unable to obtain aid from Normandy ; and to weary them by continual attacks on a small scale. But Harold was impetuous. So sure was he of success in a pitched battle that he actually formed a fleet of 700 ships to cut off the Norman retreat. He now sent a message to the Duke, offering money to quit the country peaceably. William refused, and instead proposed that Harold should hold the crown as a fief, or submit their rival claims to the Pope, or fight him in single combat. All these terms were rejected, and the Saxon army left London for Hastings, and encamped on a hill called Senlac. The night before the battle was spent by the two armies very differently. In the Saxon camp, mirth, singing of warlike songs, and drinking went on ; in the Norman camp nought was heard save the voices of the clergy, and the responses of the soldiery as they uttered prayers.

In the morning, William assembled his army, and made a harangue. The knights and leaders armed for the fight. William wore a suit of chain-mail under his surcoat ; round his neck was a case of relics, and on his right hand a consecrated ring, containing a hair said to have belonged to St. Peter ; a consecrated banner, given by Pope Alexander II., was carried by a friar at his side. The army was divided into three lines of attack. The first consisted of bowmen and light-armed men ; the second of the best men, heavily armed with spear and sword ; the third line were the cavalry, commanded by William in person.

Conscious of his inferior numbers, Harold had caused the ground in front of his position to be intrenched. His forces were in two lines. The first consisted of the men of Kent, in chain or ring-mail, and with javelins, swords, and battle-axes ; the second was formed around the standard by the men of London armed like the others. To the rear, and acting with them, was the light infantry, under Harold, and his brothers Gurth and Leofwin. The Saxons had two standards—the royal one, showing a soldier fighting ; and that of Wessex, a golden dragon.

The Normans began the battle at 9 a.m. Before the three advancing lines of soldiers rode a Norman minstrel, singing a battle-

song, in which he was joined by the united army. An English knight rode out from the front rank, and after a few passes killed him. Then the action began. Clouds of arrows were discharged from the foremost ranks. The Normans advanced to the intrenched English position, but were repulsed by javelin and battle-axe; again and again was the attack renewed and repulsed. In the thickest of the fray were Harold and Gurth. The former early received a wound in the eye from an arrow, but notwithstanding the suffering, still inspired his followers by fighting valiantly.

William now ordered the archers to shoot at the English rear, whilst with the full force of his army he attacked the front ranks. The first attack was only partially successful. The valley before the trenches was covered with dead and wounded men, and maimed horses, the terrible effects of the heavy battle-axes in the hands of Saxons. A sudden cry now arose that William was killed. He had three horses killed under him, but mounting a fourth, he took off his helmet and exclaimed, "Look at me! I live, and, by God's help, I shall conquer."

He collected the shattered ranks and made a furious attack on the Saxon position. The defences were destroyed, and knights and footmen poured through. Step by step, Harold's followers were driven back till they were in one dense body round the standard. There the final defence was made by Harold and Gurth side by side. Led by William, the Norman knights made several attempts to reach the standard. William was struck by a spear thrown by Gurth, but the latter was slain by the Duke. Still Harold, at the head of a compact body of men, offered resistance. Now twenty knights made a furious charge on the brave band, but half were slain. The others captured the position; the standard was torn down, and William's banner set up. Harold, who had fallen from loss of blood, exhausted and dying, was recognized by his armour, and killed.

Till sunset the Saxons kept up the fight, the nature of the ground being unfavourable to any organized pursuit of them. At night, the few survivors escaped into the woods.

Next day the Saxons were allowed to carry away and bury their dead.

The mother of Harold offered the conqueror "Harold's weight in gold that she might have his body to bury at the Holy Rood of Waltham;" but this was refused, and by William's orders the body was rudely interred under a vast heap of stones on the coast. Another account says that the dead Harold was buried on the beach. William afterwards permitted the body to be removed to Waltham for interment.

This, the last successful invasion of England, resulted in the complete conquest of the country, a total change in its laws and customs for a time, and the introduction of a dynasty that lasted nearly three and a half centuries.

As types of Notes of Lessons for oral teaching on this subject the following are appended. They are given in rather fuller detail than will be necessary for the *class*, but the teacher himself should have this more advanced knowledge in order that he may accurately teach the more limited amount required. Each teacher may select such details as the power and condition of his class may demand.

NOTES OF LESSON ON EARLY BRITAIN.

Subject Matter.

- I. ANCIENT BRITAIN⁽¹⁾.—Formerly part of continent.⁽²⁾ No English Channel, so men and animals (cave lion, rhinoceros, elephant, wolf, bear, etc.) crossed over from Continent.⁽³⁾ Britain also joined to Ireland then.
- II. EARLIEST INHABITANTS.—“Primitive,” “prehistoric” men⁽⁴⁾ living before history gave any records of them, with flint weapons (“Stone Period,”⁽⁵⁾ arrow heads, spear heads, and adzes). No records of these, except traces of fire in caves, bones of animals broken by men, rude carvings on bone, etc.
- III. KELTS.—These came like a wave to W. Europe, and divided into—
 - (1) Britons, for Britain, from Gaul.
 - (2) Gaels, for N. Britain.
 - (3) Cymri, in Wales.
 - (4) Erse (Irish), Ireland.
- IV. STATE OF BRITAIN, B.C. 55.
 - (1) No *Roads*.—Made as required, but not much wanted except for war-chariots.
 - (2) *Forests*—thick and extensive; abode of fox,

bear, wolf, rabbit, deer, boar, beaver, and wild cat.

- (3) *Marshes*, in riverine districts, and around the Wash, in Fen Districts, as yet undrained; the abode of eels (favourite food, and abundant for long time), wild duck (fowling favourite sport even of later Anglo-Saxons; *vide* illuminated manuscripts).
- (4) *Few Towns*, small, made of huts or wigwams of wattled osier (hence so many willow eyots then and since).

V. STATE OF BRITONS, B.C. 55.

- (1) *Dress*.—Some clad in skins in interior.
- (2) *Agriculture*.—A little wheat grown round huts and forest clearings.
- (3) *Mining*.—A little copper and tin ore dug near surface in S.W., and exported by Phœnicians, and worked into bronze weapons.
- (4) *Government*.—In *peace*, by Druids, Bards, and Vates, and Archdruid; in *war*, by elected chiefs. Many tribes, and often at war.
- (5) *Religion*.—Idolatrous, with philosophy in it (transmigration of souls, immortality); cruel to prisoners in war (sacrificed); mistletoe held sacred.

METHOD.

- (1) Explain "ancient" means old; applied to places, people, and institutions.
- (2) Point this out on map.
- (3) The old animals of the country now extinct; but fossil remains found. Explain meaning of "fossil" (dug out).
- (4) These names, of course, should not be used to the class.

- (5) *Point out to class the three periods: "Stone," "Bronze," "Iron Age."*
 (6) *Point out remnants of these still existing; viz. "Dean," "Sherwood," "Charnwood," "New," and "Dartmoor" Forests.*

NOTES OF LESSON ON CÆSAR'S INVASIONS OF BRITAIN.

[Apparatus required: Blackboard, Maps of Europe and of England. Time, 40 minutes.]

Subject Matter.

- I. JULIUS CÆSAR.—A talented and energetic Roman general, and conqueror of Gaul ⁽¹⁾ after eight years of fighting against the Gauls. (Britain known to ancients because of its tin mines.)
- II. CAUSES OF INVASION.—Cæsar said Britons had helped Gauls.⁽²⁾ Real reasons were:—His love of conquest; his desire for gaining a great name at Rome; to retain love of soldiers till he should gain imperial crown; to know every Celtic religion, mode of warfare, etc.
- III. FIRST INVASION, B.C. 55.—Cæsar questioned merchants as to British people, size of island, ports, or landing-places; ⁽³⁾ they could not or would not tell him; sent officer to inquire, who soon returned. Cæsar set sail from Portus Itius, between Calais and C. Griz Nez, with 80 ships and 12,000 men; ⁽⁴⁾ difficulty in landing, cliffs crowded with hostile Britons; ⁽⁵⁾ standard-bearer set example of bravery; ⁽⁶⁾ Britons defeated and fled to woods ⁽⁷⁾; submitted and sent hostages; ⁽⁸⁾ storm and high tides ⁽⁹⁾ drove Cæsar's ships on shore; Britons fell upon Roman legion when out foraging; ⁽¹⁰⁾ second submission; in night Cæsar left for Gaul.⁽¹¹⁾ First only preparatory to second invasion.

IV. SECOND INVASION, B.C. 54.—Embarked from same place as before, bringing more men and some cavalry; Britons retreated, and harassed foragers and scouts; Cæsar left soldiers to guard camp; came upon Britons on banks of Stour,⁽¹³⁾ near Canterbury; Britons defeated, fled to woods; during this time storm had destroyed many Roman ships; camp⁽¹³⁾ formed with rest; Britons fell upon Romans, but “phalanx”⁽¹⁴⁾ was formed; Britons beaten off; they retreated across Thames ford,⁽¹⁵⁾ Conway Stakes, near Chertsey; drove sharp stakes⁽¹⁶⁾ into banks and bed of river; Cæsar crossed, drove off Britons, captured stronghold of Cassivellaunus (St. Albans), and chief himself; imposed tribute; ⁽¹⁷⁾ set sail for Gaul.⁽¹⁸⁾

METHOD.

- (1) *Explain “Gaul;” tell class the modern name; trace route of Cæsar on map.*
- (2) *Show why Britons were likely to help Gauls. (Of same race.)*
- (3) *Why questioned merchants?*
- (4) *Point out on map every place mentioned, and trace steps of invasion. Sketch map on blackboard; describe a Roman ship and Roman weapons of war.*
- (5) *Give graphic picture of the landing, and compare Britons to New Zealand natives (explain).*
- (6) *Show disgrace to lose “eagle.”*
- (7) *Show that cavalry could not follow in order because of stockades; so British had the advantage.*
- (8) *Explain word “hostages.”*
- (9) *Show that Cæsar was not used to high tides. Mediterranean nearly tideless.*
- (10) *Get from children why sent out to “forage” (explain).*
- (11) *Lead children to see Britons were brave.*
- (12) *Why Britons fond of fighting near rivers? Show policy.*
- (13) *Explain camp; why necessary.*
- (14) *Explain “phalanx.”*
- (15) *Why necessary to cross at ford?—No large boats or bridges.*
- (16) *Tell children stakes have since been found here.*
- (17) *Tribute (price for peace or protection).*
- (18) *Draw results of campaign from the children.*

NOTES OF LESSON ON EFFECTS OF ROMAN CONQUEST.

Subject Matter.

I. BENEFITS.

(1) *To the Country.*

(a) *Roads and Bridges.*⁽¹⁾—Made for communication between castra and castra and to coloniæ; ⁽²⁾ also to overawe tribes adjacent to roads. *Examples.*—Many proceeded from *Londinium* along routes now taken by M.R., G.N.R., L.N.W.R. (only these “streets” went over hills and dales, and railways take low levels).

(b) *Towns.*—Mostly on the “streets.”

(c) *Walls.*—Across the necks of land from Tyne to Solway, and from Forth to Clyde; viz. Hadrian’s, Severus’, Antoninus’ walls. Remnants still existing.⁽³⁾

(d) *Ports.*—Even Roman ships were small (held three hundred men), and Romans were not a commercial people; yet they really made the port of *Dubris* (Dover). The Cinque Ports rose later through Normans coming.

(e) *Country cleared.*—Forests, to some extent, were cut down for roads and buildings. Marshes drained, partly for roads (Romans great engineers).

(2) *People.*

(a) *Civilization.*—Romans at this time had reached highest point of their civilization. They imported this to Britain (dress, weapons, manners and customs).

(b) *Agriculture.*—Little here before. Romans

good farmers, brought in new implements, new seeds, new modes of farming.

- (c) *Architecture*.—Old wattled osier towns became marble; large temples, baths, theatres, aqueducts—of which relics remain at Leicester, etc.⁽⁴⁾
- (d) *Language*.—British had no books or grammar; their language was all spoken. Roman written language was now imported, and books; new names for towns (Coloniæ), roads (Fosse Road), streets (Watling Street), etc., and military terms generally.
- (e) *Peace*.—Tribal wars stopped; Roman soldiers acted as police.
- (f) *Laws*.—Roman law introduced.
- (g) *Christianity* imported in the train of the Romans.

II. DISADVANTAGES.

(1) *To the Country*. None.

(2) *People*.

- (a) *Independence* destroyed, fighting spirit crushed, or warlike youths drafted abroad; so Britons became prey to Picts and Scots.
- (b) The east and south coasts after withdrawal of "Comes littoris Saxonici" (Count of the Saxon shore)⁽⁵⁾ harassed by Norse incursions.

METHOD.

- (1) Compare these as civilizing agency with those made in Highlands (William III.) and New Zealand (to quell Maories).
- (2) Point out Roman town endings—Chester, Castra, etc.; and describe a castra.

- (³) *To keep out Picts and Scots, with fleet at ends. Compare with Chinese wall.*
 (⁴) *Refer to remains of Roman bricks, tiles, pavements.*
 (⁵) *Explain why called "Saxon Shore."*

NOTES OF LESSON ON EFFECTS OF THE NORMAN CONQUEST ON THE PEOPLE.

Subject Matter.

- I. THE POPULATION IN GENERAL.—The Normans replaced the nobler and wealthier Saxons, in office and property.
- II. SAXON CLERGY.—William I. had to provide for many Norman ecclesiastics. Stigand and Edred, Archbishops of Canterbury and York, were deposed, only one Saxon Bishop being left in power; the sees in some cases being given to lay followers of the king.
- III. THE SAXON NOBILITY.—Many perished in insurrection against the Normans; others were impoverished; and many fled from the country.⁽¹⁾
- IV. SAXON OUTLAWS.—Many Saxons fled to the woods and fastnesses of the country,⁽²⁾ and thence carried on predatory warfare; and ballads sang their praises.

On the other hand many benefits followed the Conquest; viz.—

V. BENEFITS OF THE CONQUEST.

- (1) All fear of *Danish invasions* was removed.
- (2) *Trade and Agriculture* improved.
- (3) *Commerce* was enlarged: tin, lead, corn, wool, leather, were exported; and wines, linen, silks, furs, spices, and drugs were imported. Seaports arose in the south, viz., Hastings, Hythe, Romney, Sandwich, etc.

(4) *Learning* was favoured.

(5) *Architecture* was improved.⁽³⁾

METHOD.

(1) *Give a graphic description of the state of the country.*

(2) *Point out how it was these yet covered the country.*

(3) *Question, and summarize the whole.*

NOTES OF LESSON ON THE FEUDAL SYSTEM.

Subject Matter.

- I. **WHAT IT WAS.**—When barbarians overthrew the Roman Empire, they seized the lands of the latter. To defend their conquests, the lands were divided among the leaders of the barbarians; instead of rent *military duties*, according to the size of the possession, were enforced. In England in later times the chief was called the *lord*, and those beneath him were *vassals*. The latter, instead of rent, gave military service and advice, and attended the lord's courts of justice; paid money on the knighting of the chief's eldest son, marriage of his eldest daughter, and to ransom his lord if made prisoner. The lord, in return, protected his vassal.
- II. **EFFECTS.**—(1) No standing army was required.
 (2) It increased the power of the nobles against the king.
 (3) Led to civil war between rival chiefs (barons).
- III. **THE SYSTEM IN ENGLAND.**—The Conqueror modified the system existing on the Continent.
 (1) By requiring oath of fealty to himself, instead of to the vassal's lord.⁽¹⁾
 (2) By separating the grants of land over distant counties.⁽²⁾

METHOD.

- (¹) *Trace the effect of this.*
 (²) *Show how this would weaken the power of a lord.*

NOTES OF LESSON ON MAGNA CHARTA.(¹)*Subject Matter.*

I. INTRODUCTION.—Norman Conquest brought in—

(1) *A new Feudal System.*

(2) *Forest Laws.*(²)

These introduced—

(a) Quarrels between *King and Barons.*

(b) " " *Barons and People.*

Hence fortified castles increased, and civil strife.(³)

Then Norman dynasty gave place to Plantagenets; in reigns of Henry II. and Richard I. internal quarrels gave way before foreign wars; and for a time there was peace at home.

These quarrels broke out again in the absence of Richard I., and culminated in the reign of John.

II. REIGN OF JOHN (⁴).—Barons refused help to John against France; hence civil war arose. The Primate Langton resisted John at Northampton and Nottingham. At Westminster Langton produced copy of Charter of liberties granted by Henry I. Two years later the barons agreed to compel John to sign an enlarged draft of this. In 1215 John temporized about signing the Charter, and sought to bribe some of the barons.

III. THE SIGNING OF THE CHARTER.—The barons entered London in triumph against John; after a conference at Runnymede (between Staines and Windsor), John reluctantly signed the deed.

IV. CONTENTS OF THE CHARTER.

- (1) The *Church* was to be free.
- (2) The *Feudal System* was weakened.
- (3) *Liberties* were granted to *Towns*.
- (4) *Imprisonments and Fines* by the king were restrained.
- (5) *Law trial* was to be given to persons charged by the king.

METHOD.

- (1) *Explain the meaning of these words. Point out alliance of "charta" to charter, carte, card, etc.*
- (2) *Explain the nature and injury of these.*
- (3) *Give a picture of the state of the country.*
- (4) *Describe the character of John.*

WRITING (STANDARD IV.).

The new Code sufficiently indicates the direction in which the teacher is to lay out his strength (*viz.* to secure freedom and symmetry); but the blackboard will still want to be appealed to, in pointing out faults of construction and proportion.

ARITHMETIC (STANDARD IV.).

Multiplication of Money.—The *first* examples should require no carrying, except in the pounds, as—

Copious examples should be given in	£	s.	d.
these to accustom the children to the form	624	4	2
required.			4

The *next* stage would introduce carrying, at first in the farthings, then in the pence, after that in the shillings; but numerous examples should be given in each, before proceeding to the next step.

A *later* stage would deal with multipliers splitting up

into factors, within the limits of 144. When the multiplier can be split up into two sets of factors, the sum should be done in both ways, at first.

The *next* stage introduces prime numbers less than 144, as $43 = 4 \times 10 + 3$.

Subtraction as well as addition should be made use of in these exercises, the 43 should be taken as $44 - 1 = 4 \times 11$, and take away top line.

In numbers greater than 144, it is expedient, as a rule, to find 100 times the top line, 10×10 , adding as many times the top line, or the tens' and top line, as may be required; as, £64 16s. 2d. $\times 153 =$

£	s.	d.	
64	16	2	$\times 3$
		10	
<hr/>			
£648	1	8	$\times 5$ ten's line
		10	
<hr/>			
£6480	16	8	100's line
3240	8	4	5 times 10 line
194	8	6	3 ,, top line
<hr/>			
£9915	13	6	

But many sums can be done more shortly, as below—

£	s.	d.	
64	16	2	$\times 153 (= 12 \times 12 + 9)$
		12	
<hr/>			
£777	14	0	12's line
		12	
<hr/>			
£9332	8	0	144's line
583	5	6	9 times top line
<hr/>			
£9915	13	6	

where six figures less are employed than in the former way.

The *Mental Arithmetic*, before this standard has been reached, should have prepared the way for Reduction. In this note the two special difficulties to be anticipated—

(1) Whether the Reduction, in a given case, is to be *ascending* or *descending*; i.e. whether the child is to *divide* or *multiply*.

To overcome this difficulty, the class must be made thoroughly to understand that in multiplying we make *greater*; while in dividing we make *less*. Thus, if pounds are to be brought to farthings, as there will be *more* farthings than pounds, we must multiply; and in bringing farthings to pounds, as there will be a *less* number of pounds than farthings, we must divide.

(2) The *second* difficulty is to know what to do with the remainders, in ascending reduction.

Thus, in converting 6487 farthings to pounds, we have—

$$\begin{array}{r} 4)6487 \\ 1621 + 3 \end{array}$$

Here the 6487 are farthings, and therefore the 3 left are farthings, $\frac{3}{4}d$.

$$\begin{array}{r} \text{In} \quad 12)1621 \\ 135 + 1 \end{array}$$

the 1621 are pence; therefore the 1 remaining is 1d.; and in

$$\begin{array}{r} 20)135 \\ 6 + 15 \end{array}$$

the 135 are shillings; therefore the 15 remaining are shillings.

Unfortunately, as the writer thinks, the Code has made no reference to Addition, Subtraction, Multiplication, and Division of Compound Weights and Measures in Standard IV., and as a consequence teachers too frequently omit

these rules. Now, manifestly, such simple problems as adding, subtracting, multiplying, and dividing tons, cwts., qrs., lbs., ozs., etc., fall within the practical requirements of daily life. Too frequently such problems in addition and subtraction can only be done by the class, by first reducing the quantities to their lowest terms, and adding or subtracting these, the answer being again brought back to terms of higher denomination; while multiplication and division cannot be attempted at all. Surely, it cannot be said that the Arithmetic of Standard IV. is complete while this state of things endures.

MENTAL ARITHMETIC.

The following typical examples will indicate to the teacher the way in which others may be constructed.

Multiplication of Money.

I. Multiply at sight—

s.	d.	£	s.	d.	£	s.	d.
	$6\frac{1}{2} \times 5$			$6\ 11\frac{1}{2} \times 20$			$6\ 11\ 6 \times 20$
	$8\frac{3}{4} \times 9$			$3\ 9\frac{3}{4} \times 20$			$3\ 11\ 9 \times 20$
	$11\frac{3}{4} \times 10$			$8\ 11\frac{1}{2} \times 20$			$6\ 11\ 7\frac{1}{2} \times 20$
	$10\frac{3}{4} \times 12$			$1\ 11\ 6 \times 9$			$3\ 11\ 9 \times 13$
1	$2\frac{1}{2} \times 6$			$3\ 18\ 7 \times 11$			$4\ 16\ 11 \times 14$
1	$3\frac{1}{2} \times 7$			$6\ 4\ 11 \times 12$			$3\ 2\ 1 \times 15$
2	$6\frac{1}{2} \times 11$			$3\ 2\ 11\frac{1}{2} \times 7$			$6\ 17\ 9 \times 16$
3	$4\frac{1}{2} \times 12$			$6\ 1\ 1\frac{1}{2} \times 12$			$8\ 17\ 6 \times 18$

II. What will be the cost of 12 tons at £3 17s. 6d. each?

What is the price of 18 acres at £4 10s. 0d. per acre?

If one quarter of wheat cost £3 11s. 6d., what will 20 cost?

If I earn 3s. 6 $\frac{3}{4}$ d. a day, what do I earn in a week (6 days)?

A man bought 12 oxen at £13 6s. 6d. : what does he pay ?

Paid $4\frac{1}{2}d.$ an oz. : what is that per lb. (16 ozs.) ?

If 15 yards cost £25, what is that for 3 yards ?

How much will be left out of £3 6s. 8d. after paying
4 men 3s. 9d. each ?

III. To find price of a dozen at — each. *Rule.*—Turn the pence into shillings. [Count $\frac{1}{4}$ as 3d., $\frac{1}{2}$ as 6d., $\frac{3}{4}$ as 9d.]

Find the cost of 1 dozen at 3d. each.

”	”	1	”	4d.	”
”	”	1	”	$7\frac{1}{4}d.$	”

Find the cost of a dozen at—

$6\frac{1}{2}d.$ each	1s. 1d. each
$9\frac{1}{4}d.$ ”	1s. 2d. ”
$10\frac{3}{4}d.$ ”	1s. $2\frac{1}{4}d.$ ”
$11\frac{1}{4}d.$ ”	3s. $2\frac{1}{4}d.$ ”
$11\frac{3}{4}d.$ ”	4s. $6\frac{3}{4}d.$ ”

IV. Find the value of any number of dozens in same way.

6 doz. at 2d. each	14 doz. at 1s. $2\frac{1}{2}d.$ each
9 ” $3\frac{1}{2}d.$ ”	15 ” 2s. $6\frac{1}{4}d.$ ”
11 ” $3\frac{3}{4}d.$ ”	18 ” 3s. $6\frac{1}{2}d.$ ”
12 ” $6\frac{1}{4}d.$ ”	$18\frac{1}{2}$ ” 3s. $6\frac{1}{2}d.$ ”
13 ” $11\frac{1}{2}d.$ ”	$18\frac{1}{2}$ ” 4s. 6d. ”

V. To find value of a gross, first find value of 1 doz.

11 gross at $2\frac{1}{2}d.$	14 gross at 1s. 2d.
12 ” $3\frac{3}{4}d.$	12 ” 1s. $2\frac{1}{2}d.$
13 ” $11\frac{1}{2}d.$	13 ” 2s. $4\frac{3}{4}d.$

VI. To find value of scores at — each. *Rule.*—Count every shilling in the price as £1.

20 at 4s.	100 at 11s. 6d.
40 ” 5s.	200 ” 10s. 6d.
60 ” 7s.	200 ” 10s. 9d.
80 ” 7s. 6d.	120 ” 11s. 3d.
80 ” 7s. 3d.	140 ” 12s. 9d.

Division of Money.

VII. Divide at sight—

£	s.	d.		£	s.	d.
6	4 $\frac{1}{2}$	÷	2	4	11	9 ÷ 11
3	9	÷	3	5	16	11 $\frac{1}{8}$ ÷ 12
4	6	÷	4	4	6	11 ÷ 20
11	6 $\frac{1}{2}$	÷	5	3	5	5 ÷ 20
18	9 $\frac{3}{4}$	÷	6	6	17	6 ÷ 30
12	9 $\frac{3}{4}$	÷	7	8	10	0 ÷ 40
1	1	6 ÷	8	10	10	0 ÷ 50
2	3	9 ÷	9	12	10	0 ÷ 100
3	11	6 ÷	10	18	6	6 ÷ 18

VIII. To find the price of 1 at — per dozen. Reckon the shillings as pence.

Find the price of 1 at—

2s. per dozen.	3s. per dozen.
4s. „	5s. 6d. „
5s. 3d. „	5s. 9d. „
11s. „	12s. 6d. „
13s. 6d. „	17s. 6d. „
17s. 9d. „	18s. 3d. „
20s. „	21s. „

Reduction.

	ton	cwt.	qr.	lb.
Avoirdupois Table.	20	4	28	16 ozs.

1 Ton = 2240lbs. 1 cwt. = 112 lbs.

IX. Turn into ozs. at sight—

16 lbs. 8 ozs.	22 lbs. 7 ozs.	13 lbs. 11 ozs.
27 „ 10 „	13 „ 5 „	26 „ 15 „

X. Convert to qrs. at sight—

3 tons 7 cwt. 3 qrs.	5 tons 6 cwt. 2 qrs.
6 „ 11 „ 1 qr.	9 „ 18 „ 1 qr.
6 „ 3 qrs.	17 cwt.

XI. Convert into lbs. at sight—

3 qrs. 11 lbs.	2 qrs. 18 lbs.	1 qr. 27 lbs.
9 „ 17 „	11 „ 26 „	19 qrs. 18 „

XII. How many tons (at sight) in—

1679 cwt.	4678 qrs.	6,079 cwt.
2240 lbs.	8746 „	22,400 lbs.

XIII. How many lbs. (at sight) in—

6432 ozs.	9664 ozs.	6006 ozs.
3149 „	4175 „	6017 „

Long Measure.

	m.	f.	rod	yd.	ft.
Table.	8	40	$5\frac{1}{2}$	3	12 inches
	1760 yds. or 5280 ft. = 1 mile.				

XIV. Convert at sight to yards—

	36 inches	48 inches	96 inches
	320 „	640 „	132,144 „
	10,896 „	96,108 „	24,144 „

XV. How many feet in $\frac{1}{2}$ a mile?

„	„	„	$\frac{1}{4}$	„
„	„	„	$\frac{3}{4}$	„

How many yards in $\frac{1}{2}$ a mile?

„	„	„	$\frac{1}{4}$	„
„	„	„	$\frac{3}{4}$	„
„	„	„	$3\frac{1}{2}$	miles?

Liquid and Dry Measure.

	bush.	peck	gal.	qt.
Table.	4	2	4	2 pints
	9 gals. 1 firkin.	18 gals. 1 kilderkin.		
	36 „ 1 barrel.	54 „ ($1\frac{1}{2}$ barrels)	1 hogshead (ale).	
	63 „ (wine)	1 hogshead.		

XVI. How many pints in—

1 firkin	1 kilderkin
1 barrel	17 gals. 2 qts.
1 bushel	3 pecks
$5\frac{1}{2}$ gals.	$6\frac{1}{2}$ quarts

XVII. How many gallons in—

604 pints	976 quarts	176 pints
841 quarts	6071 pints	6170 quarts

Time.

	month	week	day	hr.	min.
Table.	4	7	24	60	60 seconds
365 days	1 year.	366 days	1 leap year.		
28 days	1 lunar month.	12 calendar months	1 year.		
13 lunar months	+ 1 day	= 1 year.			

XVIII. How many minutes in—

6070 seconds	3158 seconds	6,017 seconds
9146 „	1071 „	81,576 „

XIX. How many hours in—

6017 minutes	8146 minutes	901 minutes
3245 „	1417 „	83,721 „

Square Measure. = Length \times Breadth.

	sq. mile	ac.	rood	sq. rod	sq. yd.	sq. ft.
Table.	640	4	40	$30\frac{1}{4}$	9	144 sq. inches
				4840 sq. yds.	= 1 acre.	

XX. Convert at sight into roods—

64 acres	3 roods	1031 acres	1 rood
176 „	1 rood	3016 „	2 roods
972 „	2 roods		Half an acre

XXI. How many rods (poles or perches) at sight in—

3 acres	3 roods	19 poles	5 acres	2 roods	17 poles
6 „	3 „	29 „	17 „	2 „	11 „
18 „	23 poles		3 roods	27 poles	

Cubical Measure.

Table.	cub. yd.	cub. ft.
	27	1728 cub. in.

Cubic measure = length \times breadth \times depth.

1 cubic foot = $12 \times 12 \times 12 = 1728$ cubic inches.

1 cubic yard = $3 \times 3 \times 3 = 27$ cubic feet.

XXII. What is the cubic measure of a log 3 feet by 7 feet by 5 feet?

What are the contents of a cistern 3 ft. by 9 ft. by 11 ft.?

What are the contents of a box 12 ft. by 11 ft. by 6 ft.?

What are the contents of a box 7 in. by 13 in. by 12 in.?

Miscellaneous Exercises.

XXIII. In 1 ton how many lbs.?

How many lbs. in 1 cwt.?

" " " $\frac{1}{2}$ a ton.?

" " " 7 cwt.?

Reduce 4 cwt. 3 qrs. to lbs.

Reduce 7 cwt. 2 qrs. to lbs.

Reduce 1 ton 1 cwt. 1 qr. to lbs.

In 1 cwt. how many ozs.?

How many lbs. in 3 qrs. 14 lbs.?

How many ozs. in 13 lbs. 10 ozs.?

In $5\frac{1}{4}$ lbs. bread how many ozs.?

Reduce 1000 ozs. to lbs.

In 2240 lbs. how many quarters?

How many feet in a mile?

How many yards in a mile?

Reduce 20 yards to inches.

In 70 miles how many poles?

What is the difference in pints between a barrel and firkin?

How many pints in a barrel?

Exercises in Fractions.

XXIV. Find the half of 647.

What is the half of $32\frac{1}{2}$?

What is the third of 79 ?

What are $\frac{2}{3}$ of 64 ?

What is the fourth of 78 ?

Give the fourth of $78\frac{1}{2}$?

Express $\frac{2}{3}$ in terms of halves.

Find the difference between $\frac{1}{2}$ and $\frac{1}{3}$ of 12.

Which is greater, $\frac{1}{3}$ of 6 or $\frac{2}{3}$ of 9 ?

And so on, with $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, etc., $\frac{1}{6}$, $\frac{5}{6}$, etc., in fractions with a denominator not greater than 12.

XXV. The aliquot parts of £1, a yard, and 1 lb. avoirdupois must be learnt, and told at sight.

PRACTICAL HINTS FROM REPORTS OF H.M.'S INSPECTORS ON
THE "3 R's" OF STANDARD IV.

READING.

"Absence of anything like correct modulation of the voice, a total disregard of all stops, and an apparent inability to pronounce strange words, are the prevailing faults. Children will often run through all the letters of a long word, after being told to spell it, without any notion of dividing it into syllables, and when told the syllables do not seem to know the value of the letters."—MR. CODD.

"I would reiterate my conviction that the universal institution of school libraries would do much to remedy the bad reading."—MR. PAREZ.

"I take reading with intelligence to include two things :

explanation of the more unusual words and phrases, and the reproduction of the general scope of the lesson."—MR. STEELE.

"The amount of information derived from the reading lesson should always be thoroughly tested by examination at its close."—MR. VERTUE.

"In teaching the art of reading to a class which has already mastered the rudiments, I am convinced that dialogue is a most important instrument. Poetry has many of the advantages of dialogue in the demand which it makes for animation, expressiveness, and modulation of tone on the part of the reader, and has of course other advantages peculiar to itself as an instrument of moral and intellectual culture."—MR. WARBURTON.

WRITING.

"I believe the strict enforcement of dictating once, and once only, after the piece has been read over, is most useful in training children to listen carefully to what is said, not only in that lesson, but at other times."—MR. SYNGE.

"In polysyllabic compounded words, a little knowledge of etymology is the best security from blunders."—MR. WARBURTON.

ARITHMETIC.

"Children are too exclusively practised in working such problems as are expected to be given at the annual inspection, instead of being systematically exercised in general principles by means of very easy examples."—MR. FUSSELL.

"In many schools the failures evidently result from the mechanical way in which the Arithmetic is taught."

It is no doubt difficult to lead children to exercise their mental faculties, yet a good teacher will carefully cultivate the reasoning powers of his pupils by a proper course of mental exercises preparatory to, and illustrative of, the fuller working of the different rules."—MR. VERTUE.

CHAPTER XVII.

SCHEDULE II. : CLASS SUBJECTS (STANDARD IV.).

ENGLISH.—“*To recite eighty lines of poetry, and to explain the words and allusions.*”

“*To parse easy sentences, and to show by examples the use of each of the parts of speech.*” (New Code, 1883.)

“*The examination in this subject is not limited to technical grammar. The general object should be to enlarge the learner's vocabulary, and to make him familiar with the meaning, the structure, the grammatical and logical relations, and the right use of words.*” (Instructions to Inspectors.)

“*It will be the duty of the teacher to submit to you for approval on the day of the inspection, a list of the pieces chosen for the ensuing year. It is not necessary that the required number of lines should be taken from one poem, etc.*”

GEOGRAPHY.—“*Physical and Political Geography of the British Isles, British North America, and Australasia, with knowledge of their productions.*”

“*If the managers desire, they may submit to the Inspector at his annual visit, and the Inspector may approve, for the ensuing year, some similar progressive scheme of lessons.*” (New Code, 1883.)

“*The Code recognizes as the means of instruction in Geography, reading-books, oral lessons, and visible*

illustrations. The best reading-books are those which are descriptive and explanatory, are well written, and suitably illustrated, and contain a sufficient amount and variety of interesting matter." (Instructions to Inspectors.)

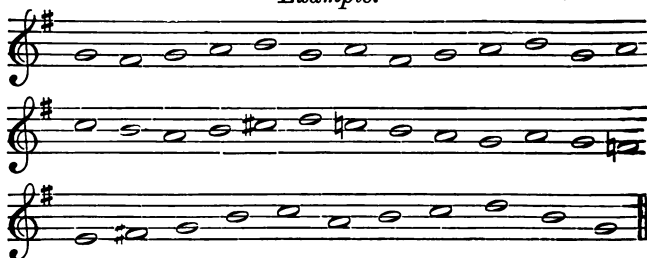
SINGING.—DIVISION IV. FOR STANDARDS IV.—VII.

PART I.—SCHOOLS USING THE STAFF NOTATION.

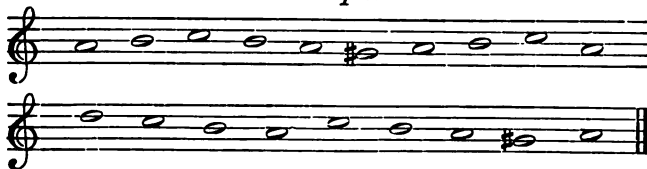
Division 4.

Note Test.—(1) To sing slowly, using the sol-fa syllables, from the Examiner's pointing, any simple diatonic passage in the keys of G (one sharp), D (two sharps), F (one flat), or B flat (two flats); and also a similar simple passage containing a modulation into the key of the fifth above (by raising the fourth degree), or the key of the fifth below (by flattening the seventh degree).

Example.



Also, to sing in the same way as above described, a short passage in the key of A minor, introducing the sharpened seventh approached from and leading to the note A, but without introducing the sixth (major or minor) of the scale.

Example.

Time Test.—(2) (a) To sing on one sound, (b) or to name rhythmically as before described (see Division 2, Time Test 2), (c) one or more series of notes and rests in $\begin{smallmatrix} 2 & 4 & 3 \\ 2 & 4 & 2 \end{smallmatrix}$ and $\begin{smallmatrix} 3 \\ 4 \end{smallmatrix}$ times, which shall include dotted minims and dotted crotchets; also a simple phrase in $\frac{6}{8}$ time.

Example.

Ear Test.—(3) To repeat and then state the names of the notes of a phrase consisting of not more than four notes, after it has been twice played, or sung by the Examiner to the syllable *laa*.

Example.

(Examiner): *Laa, laa, laa, laa.* (Children): *Sol, Mi, Re, Doh.*

Only the more advanced children of this division can be expected to answer this. Should special aptitude be shown, they may be asked to name the time of an easy phrase sung twice to them by the Examiner.

Song Test.—(4) To sing, in good time, tune, expression, and in a pleasing quality of tone, a school-song in two or more parts, or round (set to words) previously prepared.

PART II.—FOR SCHOOLS USING THE TONIC SOL-FA METHOD AND NOTATION.

Division 4.

Note Test (written or printed).—(1) To sol-fa slowly, any simple diatonic passage in the major key; also a similar simple passage containing a transition of one remove indicated by bridge-notes.

Example.

d m s f m r d s 'd t, d m r d 's f m s l t d' ||

d s m f r d m s d' 'd s f m r f m 'l t d' s m d m r l s t, d |

Also, to sol-fa a short passage in the minor key or mode, introducing *se* used thus—l se l, but without introducing *f* or *bah*.

Example.

l t d' t l se l t d' l r' d' t l d' t l se l ||

Time Test.—(2) To sing on one tone, one or more series of notes in two-pulse, three-pulse, four-pulse, or six-pulse measure, including pulse-and-a-half notes.

Example.

{ 1 : - | : | 1 : 1 | 1 : - . 1 | 1 : 1 . 1 | 1 : - ||

{ 1 : - : 1 | 1 : - . 1 : 1 | 1 : - : - ||

{ 1 : - : - | 1 : 1 : 1 | 1 : - : 1 | 1 : - : - ||

Ear Test.—(3) To give the sol-fa names of the notes of a simple diatonic phrase consisting of not more than four sounds, the Examiner first sounding the tones of the *Doh* chord and singing the exercise to *laa*, or playing it twice through.

Example.

(s m r d || d m l s || d' l t s || s l s d' ||

The above test should only be applied to the more advanced children of this division, who may be also asked to name the *time* of an easy passage sung twice to them by the Examiner.

Song Test.—(4) To sing, in good time, tune, expression, and in a pleasing quality of tone, a school-song in two or more parts, or round (set to words) previously prepared.

N.B.—It is hoped that, at some future time, the relations between the Tonic Sol-fa and the Staff Notations will be taught to scholars in Standard V. and upwards. (Instructions in Examination Singing, Feb. 14, 1883.)

DIVISION IV., STANDARD IV. AND UPWARDS.

(Continuation of Scheme, pp. 81 and 134.)

N.B.—By the Education Department's Circular, the children of Standard IV. will be required to pass the tests placed in this scheme for Standards V., VI., and VII.

STANDARD IV.

"Tune.

"(1) To sing modulator exercises containing transitions into first sharp and first flat keys, according to 'Better Method,' and 'Improper Method.' The meaning of the term 'Transition' being explained, the object of a composer in making a transition, and the effect of a sharp and flat transition must be made well known.

"(2) To sing exercises from dictation or manual signs.

"(3) To sing an easy modulator exercise to syllable '*laa*,' instead of sol-fa names. As this will be difficult, very easy exercises must be given at first.

"(4) To pitch the key-tone in any key, with the help of a tuning-fork.

"(5) *Ear Exercises.*—To tell the sol-fa names of any three tones in stepwise succession, on hearing them sung three times to '*laa*,' and having sung the chord of the tonic. This will be found comparatively easy, but the early exercises should commence on one of the pillars of the scale (*doh, me, soh*), bringing in the two strong leaning tones, *fah* and *te*, *e.g.* *s f m* and *l t d* in many different keys.

"Time.

"(1) To sing on one tone, '*laa*,' an exercise containing pulse-and-a-half notes and quarter-pulse notes.

"(2) To name the time of an easy passage sung twice by the teacher.

"Time and Tune.

"(1) The time of an exercise having been learnt, to sing it correctly in time and tune to sol-fa notes, and afterwards to '*laa*' or words.

"(2) To sing the air of an easy tune at sight to sol-fa notes three times, then to words.

"(3) To sing in good time, tune, expression, and in a pleasing quality of tone, five school-songs in two or more parts.

"Voice Training.

"(1) The same as in Standard I., in keys D, E, and F.

"(2) Scale exercises in these keys.

"(3) The children should be taught the different registers of the voice and when to use them. Let the *boys* change their register about G. Scale exercises should be most frequently practised descending, so that the thin register may be pushed downwards, thus preventing coarseness in the low tones. *Girls'* voices will not need so much training."

STANDARDS V., VI., AND VII.

"Tune.

"(1) Introduce the minor mode, explain the meaning of term, why so called, and show the necessity of altered tones in this mode. A number of exercises involving the chord of '*laa*' in various keys must be given, so that the minor chord may not be confused with the major chord.

"(2) To sing modulator exercises in the major and minor modes.

"(3) To sing exercises from dictation and manual signs.

"(4) To sing modulator exercises to '*laa*' or certain words instead of sol-fa names. The teacher should repeat some such words as 'Let us sing a merry song,' and then point to certain notes on the modulator, the children singing the sounds to the words. This is teaching singing at sight to words, and is a valuable exercise.

"(5) *Ear Exercises.*—To tell the sol-fa names of a simple diatonic phrase consisting of not more than four tones, on

hearing it sung twice, the chord of the tonic having been first sung.

"Time and Tune.

"(1) To sing any exercise from school charts, or similar from blackboard, the time having been first learnt.

"(2) To sing an easy tune, not seen before, in two parts. The time to be first taken, then the sol-fa notes three times, and afterwards the words.

"Voice Training.

"(1) Exercises as before, in keys D, E, F, G.

"(2) Scales as before, in these keys.

"(3) Special attention must be paid to the production of the high tones, no screaming or shouting being allowed."

ELEMENTARY SCIENCE.—(*"A progressive course of simple lessons on some of the following topics, adapted to cultivate habits of exact observation, statement, and reasoning."*) *"A more advanced knowledge of special groups of common objects, such as—*

"(a) Animals or plants, with particular reference to agriculture.

"(b) Substances employed in arts and in manufactures.

"(c) The simpler kinds of physical and mechanical appliances, e.g. the thermometer, barometer, lever, pulley, wheel and axle, spirit level."

"The children in Standards IV.–VII. may, if grouped together for teaching, be examined in one or two groups; and each such group may be examined in the subjects fixed by the schedule for any one of the Standards included in it, provided that the subjects chosen for the examination of each group shall follow one another in regular order from year to year." (New Code, 1883.)

NEEDLEWORK.—“*At the examination the Inspector may call for any of the following to be done :—*

- (1) To gather and stroke down 7 inches, and fix into a band of 3 inches, and set in $1\frac{1}{2}$ inches.
- (2) To fix and work a flannel patch about 2 inches square.
- (3) To cast on 21 loops and knit with two pins 30 rows, showing seam, stitch, and three decreasings on each side as for the back of a stocking.
- (4) To double down and tack a hem, and on this cut and work a button-hole, one end round, the other braced, and to sew on a linen button.
- (5) To mark on coarse calico or linen two letters chosen by the Inspector, and to darn an irregular space about 1 (square) inch on stocking material.

Optional. To cast on 25 loops, and with 2 needles knit the heel of a stocking, turn it, and cast it off.

“*The materials required for the above exercises are given as below :—*

- (1) A piece of calico 7 inches by 3, and a piece $3\frac{1}{2}$ inches square.
- (2) A piece of flannel 4 inches square, and a piece 2 inches square.
- (3) A pair of knitting pins and cotton or wool.
- (4) A piece of calico 3 inches square, and a linen button not pierced.
- (5) A piece of coarse calico or linen 3 inches square, and a piece of stocking web 3 inches square.

Optional. A pair of knitting pins and cotton or wool.

“*N.B.—It is desirable to use ‘Between’s’ for sewing needles, short pins for knitting, and fine cotton.*

"The material required should be carefully prepared and arranged beforehand. The quantity provided should be sufficient to furnish work for children grouped according to Rule 3; e.g. for 24 children in Standard V. it will be sufficient to have six packets of material prepared for four children in each group. Managers should require girls to fix their own work in the Fourth (and higher) Standards."*

1. The work of the previous Standards with greater skill, and, in addition, gathering, stroking, setting-in marking, button-hole, sewing on button. Garment, a plain night shirt, night-gown, petticoat, or child's frock, either in calico, coloured shirting, or print.

2. Darning plain (as for thin places), in stocking web material and woven fabric.

3. Knitting. 4 needles, a man's sock *or girl's stocking*.

4. Herring-bone, a patch (at least 3 inches square) on coarse flannel, or other plain-woven woollen material.

NOTES.

1. The work printed in *italics* is optional.

2. Counter-hem is not necessary where seaming can be done.

3. Garments must be shown in each Standard, but not necessarily those specified in this schedule, which are mentioned merely as examples. They must be presented in the same condition as when completed by the scholars.

4. As many garments must be shown as there are girls examined, but garments made by more than one child may be presented, provided each garment is entirely made by its own Standard.

5. Managers should encourage girls to fix their own work in the earlier Standards, and require them to do so in the Fourth and higher Standards.

ENGLISH (STANDARD IV.).

It is, perhaps, necessary to say no more of this subject so far as the recitation and understanding of the poetry is concerned, than that it covers about the same ground as the old "Literature."

In grammar *formal* lessons should be given on the nature and uses of the several parts of speech, with their inflections; with the "*meaning, structure, grammatical, and logical relations, and right use of words, together with simple exercises in Composition.*"

We repeat that these requirements imply that formal lessons should be given on each of the parts of speech, as well as on analysis of simple sentences. Notes of Lessons will, therefore, be appended on these.

Definitions in grammar should only come after long handling of the details summed up in the generalization which we crystallize as a definition. It is not right to supply any words not given in the sentence which we may have to parse or otherwise deal with; the language is sufficient for itself if we know its laws and history. Of course the knowledge of any other language than our own is highly beneficial to teach us our own, and indeed this is its main use, as a student rarely becomes proficient enough to speak or write that foreign language correctly.

Classification and Definition.

This is so important in this standard that we repeat the remarks previously given.

Grammar, more than any other subject, largely consists of classification and definition. The teacher should therefore have clear ideas of the principles underlying these. The classification should always be a *natural* one (not artificial), and a logical one, without *cross divisions* in

which the same subject comes over again under different heads of the classification. Thus, in the following table:—

BAD CLASSIFICATION.

Nouns.	{	Proper	...	...	...	John
		Common	...	...	...	flock
		Abstract	...	...	...	abstraction
		Concrete	...	...	...	flock
		Noun of multitude	...	...	...	flock

there is cross division, flock may come under three different heads. This shows there are more sub-divisions than are necessary, and violates *one* law of classification, viz. that classification should proceed on the basis of one idea, as below:—

LOGICAL CLASSIFICATION.

(a) Nouns	{	Proper	or	Nouns
		Common	Proper = individuals,	Common = classes.
(b) Nouns	{	Abstract	Things actual or intellectual.	
		Concrete		

It will be seen there are many classifications according to the notion we seek to illustrate. Thus, a tradesman divides men into customers and non-customers; a soldier into the service (meaning *his* service) and non-combatants; schoolmasters, into the profession and those not so; clerics, into the cloth and the laity. The next law of classification is that the sub-division be sufficient to include all the members of the class, thus:—

Words	{	Notional
		Relational

would leave out interjections.

Definition, not the most perfect, but the most suitable to the capacity of the child, is to be aimed at. The most perfect definition can only be given and understood when

the whole subject has been mastered. The most natural method is first to classify, then to define, i.e. first to break up into groups (to classify = to make up into classes), then draw the limits around each group. To define is to lay down the limits. Rules of definition are:—

(1) The definition should be adequate to the classification, excluding none that belong to the class, admitting none from another class, thus:—"An adjective is a word that qualifies a noun," is inadequate, as it leaves out the pronoun, and many adjectives do not *qualify*, as *a*, *an*, and *the*.

(2) The definition should itself be clearer than the subject defined.

(3) The definition should never contain one superfluous word. A perfect definition is a crystallization of thought, a *concentration of essence, an epitome*. They are thus exceedingly rare, and extremely difficult to make *impromptu*. Definition is used in grammar to mark out the parts of speech and their inflection (declension and conjugation) and with syntax (as rules of concord).

NOTES OF LESSON ON THE NOUN.

Subject Matter.

I. DEFINITION.—A noun is the name of—

(1) *A Person.*⁽¹⁾

(2) *Place.*⁽²⁾

(3) *Thing.*⁽³⁾

(3) The "*Thing*" is to include anything which is recognizable by—

(a) *The Senses.*

(b) *The Sense*, or understanding only.

[Note that it is the word as a *name*, not the person, place, or thing itself, which is the noun.]

II. KINDS OF NOUNS.—(1) *Proper* (*), viz.—(a) *Strictly proper*, as John.(b) *Becoming common*, as “the Johns.”

All names of persons and places belong to (1);
and some “things” do so.

(2) *Common*(*).—(a) *Strictly common*, as a table.(b) *Becoming proper*, as the king.(c) *Collective*, as a flock.(d) *Names of materials*, as timber.(e) *Names of agents*, as builder.(3) *Abstract* (*), as—(a) *Names of states*, as sleep.(b) *Names of action*, as sleeping.(c) *Names of qualities*, as wickedness.(d) *Names of quantity*, as a ton.(e) *Names of degree*, as want.

III. INFLECTION OF NOUNS.—Inflection is the change which
some of the parts of speech undergo to express
Number, Gender, Case, Person, Tense, Mood, Degree,
etc.

(1) *Number* (*).—(a) *Singular*, expressing one only.(b) *Plural*, expressing more than one.

(2) *Gender* (*).—This is the grammatical form
which in English indicates sex, or the want of it,
in the owner.

(a) *Masculine*, in English denotes the male sex.(b) *Feminine* denotes the female sex.(c) *Neuter* points out that sex is wanting.(d) *Common*; if the sex may be either (a) or
(b) it is called Common.(3) *Case* (*).—(a) The *Nominative* marks out the subject.

- (b) The *Objective* denotes the object.
- (c) The *Possessive* suggests ownership.

METHOD.

- (¹) *Let the class give the names of four persons.*
- (²) *Do the same with places.*
- (³) *Repeat with names of "things."*
- (⁴) (⁵) (⁶) *Elicit from class the names of three nouns in each of the foregoing categories.*
- (⁷) (⁸) (⁹) *Illustrate with numerous examples.*

THE PRONOUN.—A lesson may be constructed for the pronoun, on the type given above, but a special lesson should be prepared for the kinds of Pronouns.

NOTES OF LESSON ON THE KINDS OF PRONOUNS.

Subject Matter.

- I. THE PERSONAL PRONOUN (¹).—This is a word used mostly instead of a noun which is the name of a person. But it includes "it" and "they," used with reference to "things," as "He laid it (a book) on the table;" "They (the books) lay upon the desk."

Some relative pronouns, also, as *who*, refer to persons, as "The men who are good will be rewarded."

Here decline the personal pronouns. (²)

- II. RELATIVE PRONOUNS.—These refer to nouns previously mentioned as "antecedents," (³) which may be either names of persons or things; as *who*, *which*, *what*, *that*.

- (1) *Who* refers to persons.
- (2) *Which* to things.
- (3) *What* = that which.
- (4) *That* refers to persons and things. (⁴)

III. INTERROGATIVE PRONOUNS.—These are used in asking questions ; and are, *who, which, what* ; similar in form to II.⁽⁵⁾

IV. POSSESSIVE PRONOUNS.—*Mine, thine, his, hers, its, ours, yours, theirs, own.* These are distinguished from personal pronouns in the possessive case, by standing complete without the noun.⁽⁶⁾

V. DEMONSTRATIVE PRONOUNS.—*This, that.* These in form agree with demonstrative or distinguishing adjectives, but stand complete without the noun.⁽⁶⁾

[N.B.—Besides these are *Reciprocal, Distributive*, and *Indefinite Pronouns*, but the teacher of grammar in Standard IV. should not attempt to make the classification exhaustive.]

METHOD.

(¹) Point out the etymology and meaning of the word pronoun.

(²) Write out this table on the blackboard.

(³) Give the derivation and meaning of the word.

(⁴) Illustrate (1)–(4) by simple sentences.

(⁵) Illustrate as above.

(⁶) Contrast by illustrative sentences.

THE ADJECTIVE.—N.B. The nature and functions of this have been already learnt. The teacher should now take up the degrees of comparison, and irregularities of these.

NOTES OF A LESSON ON THE COMPARISON OF ADJECTIVES.

Subject Matter.

I. COMPARISON.—There are really only two :—

- (1) The *Comparative*, used when two nouns, or pronouns, are compared in quality, number, etc. The regular form generally ends in *r* (¹) or *er*, or *more* and *less* (²) are used with the positive.

- (2) The *Superlative*, used when more than two are compared; generally ending in *st* ⁽¹⁾, *est*, or with *most* and *least*. ⁽²⁾

The *Positive* is the simple form of the adjective, used without reference at all to comparison.

II. IRREGULAR COMPARISON.—The following adjectives are irregularly compared:—

Positive.	Comparative.	Superlative.
bad	worse	worst
good	better	best
far	farther	farthest
fore	former	foremost, first
late	later, latter	latest, last
little	less	least
much, many	more	most
nigh	nearer	nearest, next
old	older, elder	oldest, eldest
out	outer, utter	outermost, utmost
up	upper	upmost, uppermost

METHOD.

- (¹) *R* and *st* are added when the positive form already ends in *e*, as nice, nicer, nicest.
 (²) More, less; most, least; are generally used with adjectives of more than two syllables, as more (less), most (least), beautiful.

NOTES OF LESSON ON PREPOSITIONS. (¹)

Subject Matter.

[This is the most difficult class in the language so far as syntax and analysis are concerned. In teaching the use of the preposition we shall want several stages, proceeding, of course, from the most obvious

relations to the more complex, as in the following steps :—]

- I. FIRST STEP.—“The book is on the table.” Here we get our first test and definition ; thus—

(a) *A preposition is a word which shows the relation between two nouns.*⁽²⁾ This should be further illustrated by a score of similar sentences given first by the teacher, then by the class.

- II. SECOND STEP.—Either of the nouns now should be replaced by a pronoun, as—

(1) “*It* is on the table.”

(2) “The book is on *it*,”

whence we derive a second test and further definition.

(b) *A preposition is a word which shows the relation between nouns*⁽²⁾ *and pronouns.*

- III. THIRD STEP.—“He fell on the table.” Here a relation is expressed between the *verb* and the *noun*, seen still more vividly in hundreds of instances where the preposition is inseparable from the verb, as “differ from,” “engage with,” etc.

- IV. FOURTH STEP.—“He is fond of me.” Here the relation is between the *adjective* and the *pronoun* (or *noun*). Thus there remains common to all instances the definition.

(c) *The preposition is a word which shows the relation between a noun (or pronoun) and some other word (verb, adjective, noun, or pronoun) in a sentence.*⁽³⁾

As a rule, prepositions, being relational words, should have no emphasis on them except to mark antithesis or contrast, *e.g.* “*By* my sword I won it, *with* my sword I’ll keep it.”⁽⁴⁾

METHOD.

- (1) *Point out the meaning of the word "preposition" (pre, before; positus, placed), and why so called.*
- (2) *These definitions should be repeated several times by the class.*
- (3) *Must be learnt.*
- (4) *Let the class give an instance of each of the cases referred to in the complete definition (c).*

Notes of Lessons on the other parts of speech may be prepared by the teacher himself on the same lines, after consulting any good text-book on grammar.

The following may be useful as Outline Sketches of Lessons on Simple Analysis; but the parsing should be closely associated with analysis throughout.

NOTES OF A LESSON ON ANALYSIS OF SENTENCES.

(STANDARD IV.).

First Lesson.—Three-quarters of an hour.

- I. INTRODUCTION.—Let class mark paragraphs in Reader into sentences and phrases by upright lines, dots, etc. From this practice get from class approximate definition of sentence as "complete statement."
- II. SIMPLE ANALYSIS.—Write down on blackboard simple sentences of increasing complexity of predicate, with subject simple throughout: (1) Tom | walks. (2) John | bought carelessly. (3) Harry | was knocked down. (4) The house | is lofty. (5) You | are very wicked. (6) He | is told not to fight. Let the class divide the sentences into doers or agents (subjects), and statements of what is done or affirmed (predicates).
- III. EXAMINATION OF PREDICATE.—Inquire from class the use, purpose, and form of the predicate in each

case. Let them see that idea becomes more complex. At first it is a verb of doing only, next a verb taking an adverb after it, next a verb so used as apparently to turn the subject into the object, etc.

- IV. EXERCISES.—Conclude with similar examples and examination.

NOTES OF LESSON ON SIMPLE ANALYSIS.

- I. GRAMMATICAL PARSING.—*Henry* Noun (doer).⁽¹⁾
 fights Verb (doing).
 II. ANALYSIS. *Henry* Subject (doer).⁽¹⁾
 fights Predicate (doing).
Henry ⁽¹⁾ *fights* a battle.⁽¹⁾
 III. GRAMMATICAL PARSING as in I.
 IV. ANALYSIS.—“*Henry*” and “*fights*” as before.
“*a battle.*” Object. (the noun in its passive relation).
“*The brave Henry fights a battle.*”
 V. ENLARGEMENT OF SUBJECT.—As the adjective is known, this notion is rapidly taken up.
“*Henry fights the battle bravely.*”
 VI. EXTENSION OF THE PREDICATE.—The adverb is known, so this gives meaning to the above.

METHOD.

- ⁽¹⁾ *Replace the nouns by pronouns.*

NOTES ON EXTENSION OF PREDICATE.

[*Heads of Lesson* :—Introduction—Definition—Words and Phrases which express Extension of Predicate—Classification of Extensions.]

1. INTRODUCTION.—Tell the class that the predicate of a

sentence does not always convey the full meaning or idea of the action expressed; it is therefore sometimes necessary to extend or enlarge the predicate in order to do so.

II. DEFINITION.—Next let class commit to memory the following:—“*The extension of the predicate is a word or phrase which modifies the meaning of the predicate;*” as (1) John came here *yesterday*; (2) I go *every day*.

III. WORDS AND PHRASES WHICH EXPRESS EXTENSION OF PREDICATE.—Then explain that the predicate is extended by—

- (1) *An adverb*; as, John ran *quickly*.
- (2) *Prepositional phrase*; as, The eagle flies *with great swiftness*.
- (3) *Adverbial phrase*; as, He ran *faster than all*.
- (4) *Noun phrase* used adverbially; as, It changes *day by day*.
- (5) *Participle, or participial phrase*, used adverbially; as, The messenger *came running*.

IV. CLASSIFICATION OF EXTENSIONS.—Next show the children that the predicate is extended by words which express circumstances of (1) *time*, (2) *place*, (3) *manner*, (4) *cause*. Write on blackboard and make class understand the following table:—

(1) *Time*.

Some point of time; as, He came *yesterday*.

Duration of time; as, I was away *for many years*.

Repetition of an act; as, The tide ebbs and flows *twice a day*.

(2) *Place*.

Rest in a place; as, He lives *in Paris*.

Motion to a place; as, I am going *to Stroud*.

Motion from a place; as, Joe came *from Bath*.

(3) *Manner.*

Properly so called ; as, Birds fly *quickly*.

Degree ; as, I am *wholly* exhausted.

Instrument ; as, Charlie was killed *with a knife*.

Accompanying circumstances ; as, Jack went there *with a horse and cart*.

(4) *Cause.*

Ground or reason ; as, I am dying *from starvation*.

Condition ; as, He will succeed *with diligence*.

Purpose ; as, He came *to redeem us*.

Motive ; as, Joan acted *from bravery*.

Material ; as, Machines are made *of iron*.

METHOD.

Illustrate in every case by further similar examples.

NOTES OF LESSONS ON ENLARGEMENT OF SUBJECTS.

- I. INTRODUCTION.—Appeal to previous knowledge of class, of simple subject, predicate, and object, and write sentence on blackboard, as, "John struck the horse."
- II. DEFINITION.—The subject is the noun, or any equivalent of the noun that may stand as the nominative of the verb.
- III. PRONOMINAL SUBJECT.—Change "John" for the pronoun "he."
- IV. THE ADJECTIVAL SUBJECT.—"The wicked struck the horse." Here let the class note that a noun is suppressed but understood ; but not therefore to be interpolated.
- V. THE INFINITIVE SUBJECT.—To love is human. Loving is human.
- VI. A NOUN SENTENCE.—As, "That he should obey me,"

is proper. Here the class sees that *two* sentences are dealt with.

VII. EXERCISES.—Here write simple sentences on black-board, and practise class in enlarging or varying the subject of these in the several directions indicated above.

PRACTICAL HINTS FROM H.M.'S INSPECTORS' REPORTS ON
GRAMMAR (STANDARD IV.).

"Teachers will find that by following the analytic method in English grammar they save the children's minds from much puzzle, enable them to understand more readily the employment of case, mood, and tense, where they occur, and beget in them an interest in what is one of the most naturally interesting of things in language. And at the same time they are teaching English grammar in the true philosophical way."—MR. ARNOLD.

"The teaching in the upper classes is too much confined to parsing, and it would be desirable to require some formal knowledge of the definitions, accidence, and syntax."—MR. WILLIAMS.

"In poetry the lines have been too commonly learnt without any concern as to the contents, and little or nothing is known of the author, or the time at which he wrote."—MR. BALMER.

"This exercise embraces a knowledge of the life and writings of the author, and his influence upon the times in which he lived."—MR. CAMPBELL.

GEOGRAPHY (STANDARD IV.).

The Geography of Standard IV. consists of the physical and political descriptions of the British Isles (of which it must be remembered that *England* is a part), of British

North America, and Australasia, with a knowledge of their productions.

The subject matter will be found in any of the Geographical Readers now published ; but these should be supplemented by good oral lessons on specific divisions of the subject. Thus special lessons should be prepared and given on the following departments, among others—

(1) The *Mountain System* of the British Isles as a whole ; and of Great Britain alone.

(2) The *Drainage Areas* of England, of Scotland, and of Ireland.

(3) The *Lake System* of Ireland, and of Scotland.

(4) The *River Valley of the St. Lawrence*.

(5) The *Canadian Lakes*.

(6) *Ocean routes* from England to North America, and to Australia and New Zealand.

(7) The *climate and productions of the same*.

(8) The *Government* of the above.

(9) *Outfit, route, and means of progression of emigrants to above*.

(10) The *special industries* of the same.

(11) The *relations* of the above to the *mother country*.

(12) The *discovery, settlement, and history* of the same.

Although the short text-books on geography will give the outlines of the subject, it will be difficult for the teacher to find *interesting* sketches from which to prepare notes of lessons. A few of these are appended, and the teacher should cull from magazines, newspapers, books of travels, etc., for others, and then use them for notes of lessons for the class. The original extracts should be pasted into an album for the purpose (this will cost about 1s.), and occasionally read during the year.

MELBOURNE.

The population of this mushroom metropolis, this miniature London, is under 260,000. All Australia, *plus* Tasmania and New Zealand—

an area which one may estimate, very roughly, as 26 times greater than the area of Great Britain and Ireland—did not, according to the latest statistics, contain anything like the population of London alone.

The strong point, so to speak, of the Melbourne summer—the bug-bear which strikes terror into the stoutest heart—is the hot wind, sweeping before it fiery pillars of dust. This wind is spoken of as if the “fell simoon of the desert” were a refreshing breeze compared with it. It is nothing compared with the heat often felt in India. Against the dust, indeed, nothing too offensively personal can well be said. The heat, too, judged by the thermometer, is tremendous—between 108° and 110° in the shade. This would be exceptionally severe in some even of the very hot parts of India. But, judged by its effects—not on the thermometer, but on flesh and blood,—it is heat of a very different kind from the Indian. It is dry, stimulating, almost invigorating, in its immediate effect, and though this effect is likely to be followed by a reaction if the wind lasts long, it rarely does last long. The evenings and nights are generally cool enough to be bracing. They are often too cold, even in the height of the hot season. This is, indeed, the only charge that is worth bringing against the Melbourne climate. The strong may be all the stronger for being braced by the cold against the heat. But the alternations of temperature are too great for very young or delicate or imprudent people. This may help to account for the somewhat surprising fact that the death-rate of Melbourne is greater than that of London and most English towns. But, on the other hand, the combined death-rate of Melbourne and its suburbs is lower than the English death-rate, and the suburbs are so near the city that they are practically one and the same. Londoners think themselves blessed above the citizens of most European capitals in having sea breezes and sea-bathing within such easy reach of them. The Melbournians not only have their Brighton, Hastings, and Margate, to which the well-to-do can escape, leaving the crowd behind them; but the crowd itself, with no spare shillings or spare time for long railway journeys, has admirable sea-bathing and purest sea breezes within easy walking distance for any man who is bound to walk. There are few, however, who cannot afford the fourpenny railway ticket for return second-class. One often, indeed, sees in the first-class carriages people whom, in England, one would expect to see in the third. Ten minutes and twopence may take you from one of the principal thoroughfares of the city to within a few hundred yards of the sea. There, indeed, the sharks impose on the prudent bather the relatively high toll of sixpence. Their number and ferocity make it unsafe to bathe in the open, so baths have been formed by carrying out into the sea palisaded inclosures, through which the sharks look and long in vain. It is a sort of aquarium reversed, the visitors being inside the cages; but, as these are big enough for a herd of hippopotami to disport themselves in, the sixpence is as pleasantly invested as it could be in a bathing machine on the sharkless shores of Brighton or Margate. Not that to the Melbournian the need of escaping to sea

baths and breezes is as pressing as it is to so many Londoners. Melbourne is unusually open and airy, having been made, as it were, to order—laid out on a regular plan, instead of growing up spontaneously in the happy-go-lucky straggling fashion of Old-World cities, with their narrow, winding lanes and stifling alleys, through which the air has no free play. The streets here cut each other at right angles as precise as Euclid's. Many of them are unusually broad and even; the narrow ones—which by a quaint arrangement alternate with the broad—offer no obstacles to the sweep of the wind. This style is at least healthy, if too stiff and precise to be picturesque or pleasing to the eye. It can scarcely, however, be considered unpleasant. If the eye is offended, it is by the inharmonious juxtaposition in the same street of handsome and paltry houses—a jumble of Grosvenor-square and Milé-end. The latter bear trace of the days when new-born Melbourne, scrambling for gold, had no leisure to think of architectural beauty or ornamentation; the former have gradually arisen since, and, as leases fall in, will probably jostle their weak neighbours altogether out of existence. Then, some of the Melbourne streets would do credit to any capital. Not that there is even about these small houses any sign of poverty. There is, perhaps, nothing in Melbourne more remarkable, nothing that strikes a stranger more, than the absence of all squalor and distress. There are poverty-stricken quarters in Melbourne, if one knew where to look for them; but one would certainly have to look for them.

TEACHING NOTES ON AMERICAN LAKES.

The lake systems of North America are the most remarkable in the world, and are chiefly connected with the following rivers:—The Mackenzie, the Churchill, the Saskatchewan, and the St. Lawrence. The basin of the St. Lawrence contains the most magnificent chain of fresh-water lakes in the world. These are:—Superior, Michigan, Huron, Erie, and Ontario, usually called the Canadian Lakes; they have together an area of nearly 100,000 square miles, which exceeds that of the whole island of Great Britain.

"Lake Superior," the largest fresh-water lake in the world, is 420 miles long, 160 miles broad, 800 feet above the sea, and 1200 feet deep. This lake covers 32,000 square miles, which is about the size of Ireland, and is remarkable for the extensive copper mines on its shores.

"Michigan" is entirely in the United States. Length, 350 miles; breadth, 100 miles. It is connected with Lake Huron by the Strait of Mackinaw.

"Lake Huron" is 105 miles long and 70 miles broad; it is the deepest of the great lakes, being 1800 feet deep, and contains 3000 islands, of which Manitoulin Islands are the principal.

"Lake Erie," 250 miles long and 60 miles wide, is remarkable for its sudden storms. It is the most shallow of the great lakes, its mean depth being only about 100 feet.

"Lake Ontario," 180 miles long, 65 miles broad, and 500 feet deep, is the smallest of the five great lakes, but is the most important for Canadian trade. Between Lake Erie and Lake Ontario are the famous Falls of Niagara, whose height is 160 feet.

The Northern System.

	Lake.	Position.	Drained by.
1	Great Bear Lake	British N. America	Mackenzie
2	Great Slave Lake	"	"
3	Athabasca	"	"
4	Wollaston	"	Churchill
5	Deer Lake	"	"
6	Winnipeg	"	Saskatchewan
7	Winnipegosis	"	"
8	Manitoba	"	"

The Central System.

	Lake.	Position.	Drained by.
1	Superior	Between British N. America and the United States	St. Lawrence
2	Michigan		
3	Huron		
4	Erie		
5	Ontario		

ELEMENTARY SCIENCE.

Besides the subjects set down under this heading in Schedule II., a graduated course in other subjects leading up to the specific subjects will be allowed to draw grants.

The writer believes that it would be impossible to give any sufficient hints or instructions in this complicated matter to be of any service to the reader, who must be referred to special text-books on the respective subjects.

The same remark will apply to Specific Subjects, Schedule IV., a copy of which is appended.

*	1. Algebra.	2. Euclid and Mensuration.	3. Mechanics. <i>Alternative Schemes.</i>	
			A.	B.
1ST STAGE	Notation, addition, subtraction, multiplication, division.	Euclid, book I., to proposition 26, inclusive.	Matter in three states: solids, liquids, and gases. The mechanical properties peculiar to each state. Matter is porous, compressible, elastic. Measurement as practised by the mechanic. Measures of length, time, velocity, and space.	<i>Bodies at rest.</i> —Definitions. Parallelogram of forces. Centre of gravity. Mechanical powers.
2ND STAGE	The same, with G.C.M., L.C.M., and easy simple equations involving one unknown quantity.	Euclid, book I.	Matter in motion. The weight of a body, its inertia and momentum. Measures of force, work, and energy. Energy may be transferred but cannot be destroyed. Heat as a form of energy.	<i>Matter in motion.</i> —Definitions. Laws of motion. Parallelogram of velocities. Direct impact of two spheres.
3RD STAGE	The same, with simple equations involving two unknown quantities, and easy quadratic equations.	Euclid, books I. and II. Elements of mensuration.	The simple mechanical powers, viz. (1) The lever; (2) the wheel and axle; (3) pulleys; (4) the inclined plane; (5) the wedge; (6) the screw. Liquid pressure; the hydrostatic press; liquids under the action of gravity. The parallelogram of velocities. The parallelogram of forces. Examples commonly met with illustrating the mechanical powers. <i>N.B.—Instruction in this subject should be purely descriptive and experimental.</i>	<i>Fluids.</i> —Definitions. Law of equilibrium of floating bodies. Hydrostatic press. Boyle's Law. Air-pump. Common pump. Barometer.

* The three stages of such of these subjects as admit of it may be taken in any order. Any other subject sanctioned by the Department may be taken as a specific subject, provided that a graduated scheme of teaching it be submitted to, and approved by, the Inspector.

N.B.—It is intended that the instruction of the scholars in the Science subjects in this Table shall be given mainly by experiment and illustration. If these subjects are

4. Latin.	5. French.	6. Animal Physiology.	7. Botany.	8. Principles of Agriculture.
Grammar to the end of regular verbs; with simple exercises in translation.	Grammar to end of regular verbs. Ten pages of a French vocabulary.	The build of the human body. Names and positions of the internal organs. The properties of muscle.	Characters of the root, stem, leaves, and parts of the flower, illustrated by specimens of common flowering plants.	The principles influencing the supply of plant food in the soil, the necessity for cultivation, and the circumstances making tillage more or less effective.
Irregular verbs and first rules of syntax. Knowledge of Delectus or other first Latin reading-book. Translation of simple sentences of English (three or four words) into Latin.	Grammar, and translation into English of easy narrative sentences. Ten pages of a French conversation book approved by Inspector.	The mechanism of the principal movements of the limbs and of the body as a whole. The organs and functions of alimentation, circulation, and respiration.	Structure of wood, bark, and pith. Cells and vessels. Food of plants, and manner in which a plant grows. Functions of the root, leaves, and different parts of the flower.	The principles regulating the more or less perfect supply of plant food; manures as supplemental sources of plant food.
The Latin Grammar. Cæsar de Bello Gallico, book I. Somewhat longer sentences to be translated from English into Latin.	Grammar, and knowledge of some easy French book approved by Inspector. Translation of conversational sentences into French. Tolerable correctness of pronunciation.	The general arrangement of the nervous system. The properties of nerve. Reflex action. Sensation. The organs and functions of touch, taste, smell, hearing, and sight. N.B.— <i>Instruction in this subject should be illustrated by diagrams or models only.</i>	The comparison of a fern and a moss with a flowering plant. The formation of different kinds of fruits. The structure of a bean and of a grain of wheat or barley. The phenomena of germination.	The principles regulating the growth of crops, and the variations in their yield and quality.

taught to children by definition and verbal description, instead of by making them exercise their own powers of observation, they will be worthless as means of education.

It cannot, therefore, be too strongly impressed on teachers, that nothing like learning by rote will be accepted as sufficient for a grant, and that the examinations by the Inspectors will be directed to elicit from the scholars, as far as possible in their own language, the ideas they have formed of what they have seen.

	9. Chemistry.	Physics.		12. Domestic Economy. (Girls.)
		10. Sound, Light, and Heat.	11. Magnetism and Electricity.	
1ST STAGE	Elementary and compound matter. Illustrations of combination and decomposition in such bodies as hydrochloric acid, water, oxide of mercury, and rust of iron.	The three modes in which heat may be conveyed from place to place. Effects of heat on solids, liquids, and gases. Expansion by heat. The thermometer. Latent heat. Elementary notions of specific heat. Heat produced by mechanical, chemical, and vital action.	Attraction, repulsion, and polarity, as illustrated by the magnet. Terrestrial magnetism, and the mariner's compass.	Food: its composition and nutritive value. Clothing and washing.
2ND STAGE	Preparations and properties of the common gases, such as oxygen, hydrogen, nitrogen, and chlorine. The chemical character and constituents of pure air, and pure water, and the nature of the impurities sometimes found in both. Effects of plants and animals on air.	Sources and propagation of light. Intensity, shadows, shadow photometer. Reflection, mirrors. Refraction, lenses. Elementary explanation of the microscope, camera obscura, and magic lantern. Dispersion, prisms. The rainbow. Reflecting and refracting telescopes.	Attraction of light bodies by rubbed sealing-wax and glass. Experimental proof that there are two forms of electricity. Attraction and repulsion. Gold-leaf electroscope. Construction of electrophorus, electrical machine, and Leyden-jar. Explanation of atmospheric electricity.	Food: its functions. The dwelling: warming, cleaning, and ventilation.
3RD STAGE	The properties of carbon and its chief inorganic compounds. Differences between metallic and non-metallic bodies. Combination by weight and volume. The use of symbols and chemical formulae.	Propagation of sound. Elementary notions of vibrations and waves. Reflection of sound, echoes. Musical notes, simple instruments. Simple explanation of beats and nodes.	Voltaic or chemical electricity. The voltaic battery and notions of a current. Chemical effect of a current. Electrolysis. Magnetic effect of a current. Galvanometer. Induced currents. Electro-magnets. The electric telegraph.	Food: its preparation, and culinary treatment. Rules for health; the management of a sick-room.

CHAPTER XVIII.

SCHEDULE I. (STANDARD V.).

READING.—“*To read a passage from some standard author, or from a History of England.*” (New Code 1883.)

“*In Standards V., VI., and VII. books of extracts from standard authors may be taken, though such works as “Robinson Crusoe,” Voyages and Travels, or Biographies of eminent men (if of suitable length) are to be preferred. As a rule ordinary text-books or manuals should not be accepted as readers.*” (Instructions to Inspectors.)

[Three sets of Reading-books are required in this Standard, viz.—

- (1) A book of extracts from standard authors ; or
a book of travels or biographies.
- (2) A History Reader.
- (3) A Geographical or Scientific Reader.]

WRITING.—“*Writing from memory the substance of a short story read out twice ; spelling, handwriting, and correct expression to be considered.*”

“*Copy-books to be shown.*”

“*An exercise in dictation may, at the discretion of the Inspector, be substituted for composition.*” (New Code, 1883.)

“*In Standard V. the passage selected for writing*

from memory should be an anecdote occupying from ten to fifteen lines of ordinary length, and containing some sufficiently obvious point, or simple moral. The passage may, if the teacher desires, be read aloud by him. Neither accuracy in spelling, nor excellence in writing should secure a pass, unless the exercise is an intelligent reproduction of the story. The writing exercise prescribed for Standard V. may be altogether, and must be, to a certain extent, an effort of memory." (Instructions to Inspectors.)

ARITHMETIC.—"*Practice, Bills of Parcels, and Rule of Three by the method of unity. Addition and Subtraction of proper fractions, with denominators not exceeding ten.*" (New Code, 1883.)

"In Standard V. the '*Rule of Three by the method of unity*' has been prescribed in order to avoid at that stage the difficulties of the theory of proportion, and to suggest a simpler method of solving ordinary problems by a combination of the four simple and compound rules. But if the answers are correct, and have been intelligently worked by either method, you will of course accept them." (Instructions to Inspectors.)

READING (STANDARD V.),

The teacher of Standard V. is referred to instructions on Reading, Standards I.—IV.

History may be taken as a class subject as well as in the ordinary History Reader as a part of reading in Standards V., VI., VII.; but in the former case, "*a graduated scheme of teaching it must be submitted to the Inspector, and approved by him at the previous inspection.*" (Instructions to Inspectors.)

In both cases the instruction must be more systematic

and detailed, with larger reference to oral lessons than in the preceding Standards. The lessons in it will require a fuller knowledge on the part of the teacher, with more elaborate preparation. To this end, as types, the following Notes of Lessons are appended, and the Junior Teacher should prepare others on the same line.

NOTES OF LESSONS ON REIGN AND LIFE OF RICHARD III.

Subject Matter.

- I. INTRODUCTION.—The latter stage of the Wars of the Roses is now reached.⁽¹⁾

Richard was a cunning and cruel usurper, but not an infatuated villain wading through blood to his own destruction. He was a clever politician, able to deal with men, of singular moderation, great powers of application, and soldierly experience.
- II. STATE OF THE COUNTRY.—The different sections of the feudal nobility were at strife for the mastery, each trying to win over to its side the power of the Church.
- III. USURPATION.—Richard arrested the young king, Edward V., and proclaimed himself Protector, putting his nephew into the Tower. Hastings turned against Richard, on which the latter caused him to be executed. Dr. Shaw and the Duke of Buckingham caused the Londoners to acclaim Richard as king within three months of the death of Edward IV.; the young princes disappeared, and Richard became unpopular in consequence.⁽²⁾
- IV. REIGN.—The new king exhausted his treasure in gifts or bribes, but only to procure “unsteadfast friendships;” to oppose his rival, Henry of Richmond, he had recourse to forced loans. Henry landed in

South Wales, overran that principality, made his way into the heart of the Midlands before Richard, with his large army, was well on his march from Nottingham. The rivals met at Bosworth Field, where Richard had to leave it to chance whether Lord Stanley with the Lancashire troops would fight with or against him. In this supreme crisis the self-assertion of the warrior chief came out in all its savage strength, and he lost his life in one desperate effort to slay his rival with his own hand.⁽⁸⁾

METHOD.

- (¹) *Briefly recapitulate the history of these up to this period.*
- (²) *Narrate the legend concerning the supposed murder of these.*
- (³) *Describe the Battle of Bosworth.*

NOTES OF LESSON ON THE GREAT FIRE OF LONDON.

(By an Eyewitness.)

Subject Matter.

- I. LONDON IN 1666.—London then was mostly built of timber; and there were no fire-engines or water supply for the extinction of fires. The streets and houses were crowded together; and there was no provision to relieve the poor by means of unions, poor's rates, etc.
- II. THE FIRE.—This began at a baker's shop in Pudding Lane, by Fish Street, near Thames Street, City, at the dead of night. Picture the half-dressed people at the windows, and in the streets; women with children in their arms; the Lord Mayor helpless and confounded. A strong east wind blew. The churches were in flames all that Sunday. Flying

flakes of flame spread the fire, until at night all the City appeared on fire. Men pulled down and blew up houses to stop the progress of the fire. The Royal Exchange was destroyed; St. Paul's Church caught fire at the top, the lead melted and ran down, and the massive stones fell on the pavement. The poor fled to the country.

III. RESULTS OF THE FIRE.—13,000 houses ⁽¹⁾ were destroyed, 87 churches, the Royal Exchange, ⁽²⁾ Custom House, ⁽³⁾ Newgate, ⁽⁴⁾ Guildhall, ⁽⁵⁾ and 4 bridges.

METHOD.

(¹) *Compare with the great fire at Moscow, in which also 13,000 houses were destroyed.*

(²) *Give the uses of these buildings.*

NOTES OF A LESSON ON THE BRITISH CONSTITUTION.

Subject Matter.

I. FORM OF GOVERNMENT.—In early times the monarchy was elective,⁽¹⁾ though generally the heir apparent ⁽²⁾ succeeded (unless incapacitated or a female). At present the monarchy is practically hereditary, but limited by the power of the people.

The *Legislative*⁽³⁾ functions are carried out by the Houses of Parliament (*Lords and Commons*).

(a) The *House of Lords* ("Peers"—*Spiritual* ⁽⁴⁾ and *Temporal*) have hereditary succession, but the Crown can increase the number of the Peers.

(b) The *House of Commons* is elective, and consists of 658 members chosen by the people (from *Boroughs, Counties, and*

Universities). This House has power over all moneys, but their Bills must pass the other House.

The *Executive* ⁽⁴⁾ function is performed by king or queen, who signs all Bills.

II. JUSTICE.—The country is divided into *Circuits*, visited twice a year by judges, who try serious charges in the county towns. Lesser offences are tried by paid and unpaid magistrates.

III. RELIGION.—The Established (State) religion of England and Wales is the English *Protestant*, under Episcopacy; in Scotland it is *Presbyterian*, under the General Assembly; in Ireland, there is no "*establishment*;" and in all three all forms of faith are tolerated by the law.⁽⁵⁾

METHOD.

- (1) Distinguish between "*elective*" and "*hereditary*."
- (2) Explain the meaning of "*heir apparent*."
- (3) Distinguish between "*Legislative*" and "*Executive*."
- (4) Point out the distinction implied.
- (5) Summarize and question on the whole.

NOTES OF A LESSON ON THE FEUDAL SYSTEM.—No. I.

[Class: Standards V. and VI. Time: 40 minutes. Aim: To teach something of the feudal system in England, and to show its results upon the nation. Methods: Explanation, oral instruction, and catechetical. Faculties to be cultivated: Reflection, memory, and observation. Apparatus and Illustrations: Blackboard and easel for the abstract, and sketch map, chalk, duster, pointer, and map of Europe.]

I. ORIGIN OF SYSTEM.—Originated at the break-up of the Roman Empire; was introduced among Anglo-

Saxons ; England conquered by the Normans ; all the land fell into their hands ; most important result growing out of conquest was alteration in the tenure by which land was held ; alteration known as feudal system ; system thoroughly established in England at later date by Council of Salisbury, 1085.⁽¹⁾

II. DESCRIPTION OF SYSTEM ⁽²⁾.—The feudal system was one in which an estate called a feud, feof, fief, or benefice, was granted on conditions ; not as an estate of absolute and independent ownership ; granter termed lord ; receiver, vassal ; special relationship established between them—lord undertook to protect vassal, vassal put himself under obligation of military service at his own expense (generally forty days a year), also to defend person and family of lord, had to attend his lord's court ; granter of land became known as Lord Paramount or suzerain,⁽³⁾ grantees as *tenants in capité* ; practice gave rise to new relations and terms ; *tenants in capité* granted away part of their land ; taker termed sub-vassal or tenant paravail,⁽⁴⁾ in consequence of his being the vassal of his lord paramount, at the same time the lord of the sub-vassals ; intermediate lord called *mesne lord*—lands he retained *demesne lands*.

III. CEREMONIES IN CONFERRING A FIEF.—Three in number :

(1) *Homage*, (2) *Fealty*, (3) *Investiture*.

(1) *Homage*—from *homo*, a man—because vassal became the man of his lord ; expression of submission and devotedness ; in consideration of lands held of the lord ; homage performed bareheaded, ungirt, kneeling—in this posture promises of faithful service were made.

(2) *Fealty*.—Confirmation of the promises by

oath; oath taken on knees, without sword and spurs; hands placed between those of his lord.⁽⁵⁾

(3) *Investiture*.—Actual conveyance of lands constituting fief; two kinds—*Proper*, in English law called “Livery of Seisin,” actual putting in possession of the ground; *Improper*, or *Symbolical*, by which lands were conveyed by delivery of a wand, branch of tree, etc.

IV. CONDITIONS ON WHICH LET.—Besides claim of fealty and service, lord derived other advantages from estate granted in fief, known as “Feudal Incidents.”⁽⁶⁾ These were (1) *Aids*, (2) *Reliefs*, (3) *Primer Seisin*, (4) *Wardship*, (5) *Marriage*, (6) *Fines*, (7) *Escheat*.

(1) *Aids*.—Money payments to the lord on special occasions; reduced to three by *Magna Charta*: (a) Ransoming the lord’s person⁽⁷⁾, (b) *Knighting* his eldest son, (c) *Marrying* his eldest daughter.

(2) *Relief*.—Same as Saxon heriot; money or other payment made by one of full age taking a fief by descent; was mostly uncertain in its amount; led to one of the greatest abuses of feudalism; *Magna Charta* settled the amount at about one-third of the annual value of the estate.

(3) *Primer Seisin*.—Also first-fruits; was payment made only by *tenants in capite*; one year’s profit of the lands; was in addition to the relief.

(4) *Wardship*.—Guardianship or chivalry; gave to lord right to hold person and lands of minors; gave no account of the profits; right abused down to time of Stuarts.

(5) *Marriage*.—Right of lord to dispose of his ward in marriage; if refused, claimed as much as married one would give for marriage; doubled the

value if without consent; became the source of great abuse and extortion.

(6) *Fines*.—Payment paid to lord when tenant transferred his fief to another; ⁽⁸⁾ tenants of Edward III. made to pay one-third of annual value.

(7) *Escheat*.—Return of estate to king or lord of fee when vassal died without heirs or was attainted for committing treason or felony.

V. EFFECTS UPON NATION.⁽⁹⁾

(1) *Saxons*.—To what extent it existed before conquest in England a moot point; land taken from them by conquest; driven north and west; bought and sold with soil.

(2) *Normans*.—Having helped to conquer country, greater portion given to them; built themselves castles; lived like little kings.

(3) *Crown*.—William gained advantages over people by system; sub-divided the estates; prevented revolt; fealty sworn to king as well as to lord; kept lord dependent on king; king could summon tenants three times yearly; could then see force of the court.⁽¹⁰⁾

VI. ABOLITION OF SYSTEM.—Much reduced at signing of Magna Charta, and after the Wars of the Roses; appears down to the abolition of feudal tenure in reign of Charles II.; relics of system still found, viz. in the

- (1) Present House of Peers.
- (2) Coronation ceremony.
- (3) Annual assembly of cavalry.
- (4) Legacy and succession duties.
- (5) Annats, or first-fruits.
- (6) Laws on entail.⁽¹¹⁾ ⁽¹²⁾

METHOD.

- (¹) *Introduce lesson by asking class if any of their fathers have gardens or farms. Does your father have it for nothing? Could he pay for it in any other way than by rent?*
- (²) *Then tell them they are going to hear something about a system of letting land during the time of the Normans.*
- (³) *Difficult words written on blackboard, and explained.*
- (⁴) *So called because they make avail or profit of their lands.*
- (⁵) *Compare with the oath taken by soldiers.*
- (⁶) *Compare with the letting of the land during the present century.*
- (⁷) *Draw out of class the name of any king ransomed.*
- (⁸) *Question out of class various offences for which fines are paid.*
- (⁹) *These should be drawn out of class by questions.*
- (¹⁰) *Let class show how much more power William had over his subjects by this system.*
- (¹¹) *Let class point out in what way they resemble the feudal system.*
- (¹²) *Question on whole.*

NOTES OF A LESSON ON THE FEUDAL SYSTEM.—No. II.

I. ORIGIN.—In the invasion of the Roman Empire(¹) by tribes of Germans(²), in fourth, fifth, and sixth centuries. When a district was conquered greater part was divided among soldiers, large share going to the chief; soldiery required to bear arms to repel any new invader; chief distributed(³) some of his estates among favourite warriors; held during pleasure of former; estate called feud in tenth century, chief called suzerain; the holders of large estates carved them out amongst followers on same condition on which they held theirs from king.

II. CEREMONIES ON RECEIVING FEUD.—Three ceremonies(⁴):

(1) *Homage* (⁵), (2) *Fealty* (⁶), (3) *Investiture*.

(1) *Vassal* knelt before lord, placed hands between lord's, and promised to become his man, and serve him in peace and war.

(2) *Vassal* took oath of fealty, or faithfulness.

(3) *Lord* then invested him by giving him possession.

III. INTRODUCTION INTO ENGLAND.—System introduced, in modified form, into England by Conqueror⁽⁶⁾; raised army by promising to divide country amongst them; parcelled it into 60,215 knights' fees.⁽⁷⁾ A *fief*, or land, granted to chiefs consisted of number of fees usually; king called *Lord Paramount*, others *tenants in capité*; latter distributed land among dependants, as on continent. Property in England held in four ways, depending on what service tenant had to perform; service either free or base⁽⁸⁾—*free*, as in serving in war or paying money; *base*, suited to those in servility, as making hedges, ploughing land; first was most necessary.⁽⁹⁾

IV. ADVANTAGES OF ENGLISH SYSTEM TO KING.—(1) Though king granted large estates to followers, he took care they should be well scattered⁽¹⁰⁾ to make it difficult to rebel. (2) Every sub-vassal, when he took oath of fealty to his lord, took a higher oath to serve the king.

V. DISADVANTAGES TO COUNTRY.—More powerful barons⁽¹¹⁾ could raise an army of their own vassals; frequently quarrelling among themselves; sometimes made war against the king.⁽¹²⁾ Country was thus in an unsettled state; manufactures, commerce, arts, and sciences, neglected in consequence.⁽¹³⁾

VI. END.—Wars of Roses⁽¹⁴⁾ were the death-blow of feudal system. So many nobles were killed during these wars, that villenage⁽¹⁵⁾ was abolished, and those whose ancestors were little better than slaves became freemen.

METHOD.

(1) *Short explanation.*

(2) *Give names of tribes.*

(3) *Explain all this by supposing one boy to be king, and to let his land to other boys (vassals), who again let theirs to those below them.*

- (4) *Explain word "forms."*
- (5) *Make class understand difference between "homage" and "fealty."*
- (6) *Remind class who he was.*
- (7) *Explain what knight's fee was, and that king could get an army of 60,000 in very short time.*
- (8) *Introduce words villeins regardant and villeins in gross, and show difference.*
- (9) *Show that it was the essence of military feudal system.*
- (10) *Show how politic this was, and mention case of Robert, Earl of Moreton.*
- (11) *Instance Warwick, the king-maker.*
- (12) *Explain that this was so, especially in earlier stages.*
- (13) *Lead class to see this was necessarily the result.*
- (14) *Mention what these were.*
- (15) *Explain this term. Recapitulation.*

SPELLING.

In Standard V. besides the spelling given out of the reading-books in dictation, formal lessons in spelling should be given to the class, especially on words of similar sound but different meanings, and words of different meanings under the same form. The most common instances of these are now given, and the class should be taught to frame sentences containing them.

Words of similar Sound, different in Spelling and Sense.

Acts, deeds.	Bail, surety.	Base, mean.
Axe, chopping tool.	Bale, bundle.	Bass, music.
Ail, to be ill.	Bait, lure.	Be, to exist.
Ale, beer.	Bate, to lessen.	Bee, insect.
Air, atmosphere.	Bald, without hair.	Beach, sea-shore.
Ere, before.	Bawl'd, cried out.	Beech, tree.
Aisle, part of church.	Ball, round thing.	Bean, pulse.
Isle, island.	Bawl, cry out.	Been, past of to be.
All, every one.	Bare, naked.	Beat, strike.
Awl, boring tool.	Bear, animal.	Beet, plant.
Ant, insect.	Baize, cloth.	Beau, fop.
Aunt, relative.	Bays, trees.	Bow, weapon.

Beer, ale.	Dew, moisture.	Hair, head covering.
Bier, support.	Due, owing.	Hare, animal.
Bell, sounding instrument.	Dire, dreadful.	Hall, large room.
Belle, lady.	Dyer, one who dyes.	Haul, to pull.
Blew, did blow.	Doe, female deer.	Hart, an animal.
Blue, colour.	Dough, paste.	Heart, organ.
Boar, animal.	Done, acted.	Heal, cure.
Bore, to pierce.	Dun, creditor.	Heel, part of foot.
Board, plank.	Draft, bill.	Hear, hearken.
Bored, did bore.	Draught, drink.	Here, in this place.
Bold, brave.	Fain, willing.	Heard, past of to hear.
Bowl'd, did bowl.	Feign, dissemble.	Herd, a drove.
Bough, branch.	Faint, languid.	Hew, cut.
Bow, to bend.	Feint, pretence.	Hue, colour.
Boy, lad.	Fair, beautiful.	Him, that man.
Buoy, float.	Fare, diet; hire.	Hymn, holy song.
Braid, hair twisted.	Fair, market.	Hole, cavity.
Bray'd, did bray.	Feat, deed.	Whole, the lot.
Bread, food.	Feet, part of body.	Hoop, band.
Bred, brought up.	Fir, tree.	Whoop, to shout.
Buy, to purchase.	Fur, soft hair.	I, myself.
By, near.	Flea, an insect.	Eye, organ.
Cell, chamber.	Flee, to run.	In, within.
Sell, dispose.	Flew, did fly.	Inn, public-house.
Cite, summon.	Flue, of chimney.	Indict, prosecute.
Sight, sense.	Fôrth, forward.	Indite, compose.
Site, situation.	Fôurth, a part.	Knave, rogue.
Clause, a section.	Foul, unclean.	Nave, part of wheel.
Claws, talons.	Fowl, bird.	Knead, to work dough.
Climb, to get up.	Freeze, congeal.	Need, poverty.
Clime, climate.	Frieze, cloth.	Knew, did know.
Coarse, not fine.	Gait, walking.	New, not old.
Côurse, race.	Gate, entrance.	Knight, a title.
Corse, a carcase.	Gilt, plated.	Night, time of darkness.
Creak, make noise.	Guilt, sin.	Know, understand.
Creek, inlet.	Grate, fireplace.	No, not so.
Dane, man of Denmark.	Great, large.	Knows, understands.
Deign, vouchsafe.	Groan, moan.	Nose, nasal organ.
Dear, costly.	Grown, increased.	
Deer, animal.	Hail, frozen rain.	
	Hale, strong.	

Lade, to load.	Peal, sound of bells.	Rough, uneven.
Laid, placed.	Peel, rind.	Ruff, collar.
Lead, metal.	Peer, nobleman.	Rye, corn.
Led, did lead.	Pier, the column.	Wry, crooked.
Leak, to let out.	Place, situation.	Sail, part of ship.
Leek, an herb.	Plaice, fish.	Sale, selling.
Lo, behold.	Plain, clear.	Scene, sight.
Low, humble.	Plane, surface.	Seen, beheld.
Made, did make.	Plait, fold.	Sea, water.
Maid, servant.	Plate, silver.	See, observe.
Mail, armour.	Pole, stick.	Seam, joining.
Male, masculine.	Poll, head.	Seem, appear.
Main, chief.	Praise, commend.	Sees, behold.
Mane, horse's hair.	Prays, beseeches.	Seize, catch hold.
Mean, low-minded.	Preys, seizes.	Sent, did send.
Mien, aspect.	Pries, searches.	Scent, smell.
Meat, flesh.	Prize, a gift.	Cent, hundred.
Meet, fit.	Rain, water.	Shew, point out.
Mete, measure.	Reign, rule.	Show, exhibition.
Moan, lament.	Rein, of a bridle.	Sloe, fruit.
Mown, cut down.	Raise, lift.	Slow, tardy.
Nay, no.	Rays, light.	So, thus.
Neigh, cry of horse.	Raze, demolish.	Sow, to scatter seed.
Not, not so.	Rap, knock.	Sole, part of foot ;
Knot, fastening.	Wrap, fold.	fish.
Oar, boat instrument.	Read, past of read.	Soul, spirit.
O'er, over.	Red, colour.	Soar, rise.
Ore, metal.	Rest, ease.	Sore, diseased.
One, a number.	Wrest, force.	Some, several.
Won, past of win.	Right, correct.	Sum, money.
Pail, a vessel.	Rite, a tenet.	Son, male child.
Pale, whitish.	Write, to mark with	Sun, source of light.
Pain, torment.	pen.	Stare, look.
Pane, glass.	Ring, ornament.	Stair, step.
Pair, couple.	Wring, twist.	Steal, thieve.
Pare, to cut.	Road, highway.	Steel, refined iron.
Pear, a fruit.	Rode, did ride.	Stile, step.
Pause, stop.	Row'd, did row.	Style, manner.
Paws, feet.	Roe, eggs of fish.	Straight, not crooked.
Peace, quietness.	Row, rank.	Strait, narrow.
Piece, a part.	Rote, by heart.	
	Wrote, did write.	

Tacks, small nails.	To, unto.	Wait, stay.
Tax, rate.	Too, also.	Weight, heaviness.
Tail, end of body.	Two, number.	Ware, merchandise.
Tale, a story.	Toe, part of foot.	Wear, to have on.
Their, of them.	Tow, drag.	Way, road.
There, in that place.	Vain, conceited.	Weigh, to poise.
Threw, did throw.	Vein, blood vessel.	Weak, feeble.
Through, in and out of.	Vale, valley.	Week, 7 days.
Throne, seat.	Veil, covering.	Wood, timber.
Thrown, hurled.	Wade, walk in water.	Would, was willing.
Told, related.	Weigh'd, tried in scale.	Yew, tree.
Tôll'd, did toll.	Waist, middle.	You, yourself.
	Waste, consume.	Ewe, female sheep.

Words with different meanings.

Address. To direct—Bearing—Cleverness—Direction—Petition.
 Air. What we breathe—Music—Mien.
 Angle. A corner—To fish.
 Apparent. Plain; visible—Seeming.
 Arch. Part of a circle—Mirthful.
 Ashes. Trees—Cinders.
 Bachelor. Unmarried man—A degree.
 Bait. A temptation—Refreshment—To worry.
 Ball. A round thing—Dancing party.
 Bank. A heap—A place for money.
 Bar. Wood, etc.—To stop a passage—Place of criminal.
 Bark. Rind—A vessel—A dog's cry.
 Base. Vile—Foundation.
 Baste. To pour dripping over meat—To sew slightly.
 Bat. To strike a ball—An animal.
 Bay. A tree—An inlet of the sea—A colour—To bark.
 Beam. A piece of timber—A ray of light.
 Bear. To carry—To endure—An animal.
 Bed. To sleep on—The channel of a river.
 Beetle. Insect—A mallet.
 Bill. The beak of a bird—An account.
 Billet. A log—A note—A small paper.
 Bit. A small piece—The iron in horse's mouth.
 Blade. The cutting part—A leaf.
 Blow. A stroke—To puff—To blossom.
 Board. A plank—To live with another.
 Boot. Covering for leg—Profit.
 Bound. A limit—A heap—Did bind.
 Bowl. A vessel—A ball—To roll.

- Box. A tree—A chest—A slap on the ear—A seat—To fight with fists.
- Brace. To bind—A bandage—A couple.
- Brazier. A worker in copper—A pan.
- Brook. A rivulet—To endure.
- Bugle. A horn—A glass bead.
- Bull. Male of cow—Edict of the Pope—A blunder.
- Butt. A vessel—Point aimed at—To strike with head.
- Calf. The young of a cow—Part of the leg.
- Can. A metal jug—To be able.
- Cape. A headland—Covering for the neck.
- Caper. To skip—A bud.
- Card. Stiff paper—To comb.
- Case. A covering—State—Inflexion of nouns.
- Cast. To throw—To mould—A moulded form.
- Cataract. A waterfall—A disease in the eye.
- Charge. Care—Command—Accusation—Attack.
- Chase. To hunt—To engrave.
- Cleave. To split—To stick.
- Clove. A spice—Did cleave.
- Club. A stick—A society—To pay together.
- Comb. An instrument for hair—The cells of bees.
- Commit. To intrust—To do evil—To send to prison.
- Concordance. Agreement—Index.
- Content. Satisfied—Capacity.
- Copy. A model—An imitation.
- Corn. Grain—Horny substance on foot.
- Count. To reckon—An earl—An indictment.
- Counter. A shop table—A coin—Contrary.
- Court. To solicit—Space before a house—A little street—A hall of justice—A meeting of judges.
- Crab. A shell-fish—A wild apple.
- Craft. Cunning—A trade—Small sailing vessel.
- Crane. A bird—A machine to raise weights.
- Cricket. An insect—A game.
- Crop. The harvest—The crow of a bird—To cut short.
- Cross. A body laid over another—Misfortune—Peevish—To thwart.
- Crow. A bird—A lever—The voice of a cock.
- Cry. To call out—To weep.
- Date. A time—The fruit of a palm tree.
- Deal. A great part—Fir-wood—To traffic—To share.
- Dear. Beloved—precious—Expensive.
- Deck. The floor of a ship—To dress—To adorn.
- Desert. Deserving—To forsake.
- Die. To pass away—A stamp—A little cube.
- Diet. Food—An assembly—To eat.
- Divers. Plungers under water—Several.
- Dock. Place for ships—An herb—To cut off.
- Down. Feathers—A plain—Not up.

- Draw.** To drag—To take—To delineate.
Drill. To bore—To exercise.
Drug. A simple—Anything worthless.
Dun. Dark coloured—A creditor.
Ear. The organ of hearing—A spike of corn.
Elder. Older—A tree.
Endure. To last—To bear.
Even. Level—Evening—Notwithstanding.
Exact. Correct—To require.
Express. To utter—To squeeze out.
Fair. Beautiful—Just—Favourable—A market.
Fare. The price of passage—Provisions.
Fast. Firm—Swift—Abstinence from food.
Fawn. A young deer—To court.
Feed. To eat—Rewarded.
Fell. Did fall—To cut down—Cruel.
Fellow. An associate—One of a pair—A wretch.
Felt. Perceived—Substance for hats.
Figure. Shape—Statue—A number.
File. A tool—A rod for papers.
Fillet. A band—The part of a leg of veal.
Fine. Thin—Clear—Splendid—A forfeit.
Firm. Strong—Steady—A house of trade.
Fit. Proper—A paroxysm—To suit.
Flag. A water plant—A paving stone—Ensign—To become spiritless.
Flatter. Smoother—To praise falsely.
Fleet. A navy—Nimble.
Flock. A company—A lock of wool.
Flue. A chimney—Soft fur or down.
Fold. A pen for sheep—A double or plait.
Foot. Part of the body—Twelve inches.
For. Instead of; on account of—Because.
Forge. To shape—To counterfeit.
Founder. One who founds—A caster of metals.
Fret. To be cross—To wear away.
Fuller. Nearer full—A cleanser of cloth.
Game. Sport—Animals chased.
Gin. A snare—A spirit.
Gore. Clotted blood—To pierce with a horn.
Grain. Corn—Particle—A weight.
Grate. A range of bars—To wear away.
Grateful. Thankful—Delightful.
Grave. The place where corpses are laid—Serious.
Graze. To eat grass—To touch slightly.
Green. A colour—Fresh—Unripe.
Gross. Large, coarse—Twelve dozen.
Ground. Earth—The first coat of paint—Sharpen by grinding—
 Reduced to powder.
Gum. The flesh near the teeth—A sticky substance.

- Habit. State—Custom—Dress.
 Hail. Frozen rain—To salute.
 Hamper. A basket—To perplex—To clog.
 Hatch. To produce birds from eggs—To plot.
 Heaven. The abode of the good—The sky.
 Help. To assist—To prevent.
 Hide. To conceal—The skin.
 Hind. A female stag—A peasant.
 Hip. The joint of the thigh—Fruit of the dog-rose.
 Hop. To jump on one leg—A plant.
 Host. The master of a feast—Landlord—An army.
 Hue. A colour—An alarm.
 Husband. A married man—To manage.
 Jar. A vessel—Discord.
 Jet. A fossil—A spout of water.
 Just. Upright—Exactly.
 Kind. Benevolent—Sort.
 Kite. A bird of prey—A paper toy.
 Lace. A string—Woven thread.
 Lake. Water surrounded by land—A colour.
 Lap. To lick up—To fold—Top of the knees.
 Last. Latest—To continue—The mould for shoes.
 Lawn. An open space—Fine linen.
 Lay. To place down—To wager—Did lie—A song; a poem—Not clerical.
 League. A band—Three miles.
 Lean. To incline—Flesh—Thin.
 Leave. Permission—To quit—To desist.
 Left. Opposite to right—Not taken.
 Let. To permit—To hinder—A hindrance.
 Letter. A vowel or consonant—An epistle.
 Lie. To rest—To utter falsehoods—A fib.
 Light. Illumination—Knowledge—Bright—Not heavy—To kindle—To settle.
 Like. Resembling—To approve—As.
 Lime. Burnt chalk—A fruit—A sticky substance.
 Line. A string—A single verse—To cover inside.
 Link. A ring of a chain—A torch—To connect.
 Litter. A bed—Disorder—A brood.
 Lock. A fastening—Place where men pass barges in canals.
 Long. Drawn out—To desire earnestly.
 Lot. Fortune—A portion.
 Mace. Sign of authority—A spice.
 Mail. Armour—A post-bag.
 Mangle. To smooth linen—To cut badly.
 March. Month—To walk.
 Mast. A pole of a ship—Fruit of oak or beech.
 Match. A thing that easily kindles—An equal.
 Mead. A meadow—Honey-wine.

- Meal.** A repast—The flour of corn.
Mean. Base—Niggardly—To intend.
Meet. To face—Proper, suitable.
Mine. Place for minerals—Belonging to me.
Mint. A plant—The place where money is coined.
Mole. An animal—A spot on the skin—A mound.
Moor. Hilly ground—A negro—To anchor.
Mortar. A vessel for pounding—Cement.
Mould. The ground—The shape cast.
Nail. Horny growth on the fingers and toes—A spike—2½ inches.
Nap. A short sleep—Down.
Neat. An ox or cow—Elegant—Pure.
Nervous. Vigorous—With weak nerves.
No. Not any—Refusal or denial.
Oblige. To compel—To bind—To please.
Order. Regularity—A command.
Organ. An instrument of the body—A musical instrument.
Page. Side of a leaf—An attendant.
Pale. Wan—Dim—A stake or rail.
Pall. A mantle—To become tasteless.
Palm. A tree—Part of the hand—To impose upon.
Patient. Enduring—A sick person.
Peck. ¼ bushel—To pick up food—To strike at.
Peer. Equal—A nobleman—To peep.
Pen. A writing instrument—Inclosure.
Perch. A fish—That which birds roost on—5½ yards.
Pet. A passion—A favourite.
Pike. A fish—A long lance.
Pile. A beam—A heap.
Pine. A tree—To languish.
Pinion. A wing—Fetters for the arms—A small wheel—To shackle.
Pink. A flower—A rose colour.
Pitch. Thick tar—Elevation—To throw—To fall.
Plate. A round dish—Silver—Flattened metal.
Poach. To boil slightly—To steal game.
Pole. A long rod—5½ yards—Extremity of axis—A native of Poland.
Port. A harbour—A gate—The gun-hole in a ship.
Porter. A door-keeper—One who carries loads—Beer.
Post. A piece of timber—A messenger—Employ.
Pound. 20s.—A weight—A pen for stray beasts—To powder.
Prefer. To select—To advance.
Prune. To lop—A dried plum.
Pupil. Aperture of the eye—A scholar.
Quail. A bird—To tremble.
Quarter. ¼th—Mercy—8 bushels—To lodge soldiers.
Race. A generation—A course at running.
Rail. A paling or post—To speak against.
Ram. A male sheep—To drive in.
Rank. Luxuriant—Rancid—A row or line—Dignity.

- Rash. Hasty—A breaking out.
 Rear. The hinder part—To raise—To educate.
 Rent. A tear—Income—Tore—Torn.
 Rest. Repose—The remainder—To lean.
 Right. True—Straight—Not left—Justice—A just claim.
 Ring. A circle—To sound a bell.
 Rock. A mass of stone—To shake.
 Roe. A female deer—The eggs of fish.
 Rose. A flower—Did rise.
 Rue. A plant—To regret.
 Rush. A plant—To move towards.
 Sack. A bag—A wine—To pillage.
 Sage. A plant—Wise.
 Sash. A band—A window frame.
 Saw. A cutting instrument—Did see.
 Scale. A balance—A covering on fish—To climb—To peel off.
 Seal. An animal—A stamp—To close up.
 Season. Part of the year—A fit time—To give a relish—To fit for use.
 See. Diocese—To view.
 Set. To place—To plant—To become solid—A number of things.
 Settle. To fix—To sink—A seat.
 Shaft. An arrow—A pit—The pole of a carriage—A part of a pillar.
 Shed. A slight building—To spill.
 Shoal. A multitude—A sand-bank—Shallow.
 Shore. The coast—A support.
 Size. Bulk—A sticky substance.
 Smelt. A fish—To melt ore—Did smell.
 Sole. The bottom of the foot—A sea-fish—Only.
 Sound. A noise—A wide strait—Hearty—To try depths.
 Spirit. The soul—Courage—A distilled liquor.
 Spring. One of the seasons—An elastic body—A leap—A fountain—To arise—To grow.
 Steep. Inclined—To soak.
 Steer. A young bullock—To direct.
 Stem. A stalk—To oppose a current.
 Stern. Severe—The hind part of a ship.
 Stick. A piece of wood—To adhere—To stab.
 Still. Quiet—To calm—A vessel for distilling—To this time—Notwithstanding.
 Strain. To filter—To sprain—A sound.
 Succeed. To follow—To prosper.
 Suffer. To allow—To endure.
 Suit. A set—Courtship—An action at law—To fit.
 Swallow. A bird—To pass down the throat.
 Table. A board for meals, etc.—An index.
 Tack. To join—To direct a ship—A little nail.
 Taper. A candle—Narrow.
 Tender. Attendant—Soft—To offer.

Till. To cultivate—A money box.
 Toll. A tax—To ring.
 Top. The highest part—A plaything.
 Treat. To negotiate—To discourse—A feast.
 Turtle. A dove—The sea-tortoise.
 Usher. To introduce—An under-teacher.
 Utter. To speak—Outermost.
 Vault. An arched cellar—To leap.
 Vice. Wickedness—A screw press.
 Wages. Pay—Carries on.
 Well. A pit of water—In good health.

Common Geography Roots.

Aber, or Ber, the mouth of a river ; as Aber-deen, Ber-wick, Aber-gavenny.
 Beau, bel, or bello, pleasant, beautiful ; as Beau-fort, Beau-lieu, Portobello, Bel-fast.
 Ben, or pen, mountain ; as Ben Lawers, Pen-nine Chain.
 Berg, a mountain ; as Heidelberg, Lemberg.
 Bridge, a crossing ; as Tun-bridge, Trow-bridge.
 Burgh, borough, a town, castle ; as Edin-burgh, Scar-borough.
 Chester, or caster, an encampment ; as Win-chester, Don-caster.
 Col, a colony ; as Col-chester, Lin-corn.
 Dale, a valley ; as Ken-dal, Annan-dale.
 Dun, dom, or don, a hill ; as Dun-wich, Snow-don, Dum-fries.
 Ea, ey, ay, y, oe, an isle or island ; as Atheln-ey, Batters-ea, Guerns-ey.
 Fell, feld, or field, a rock or mountain ; as Dovre-feld, or Dovre-field, Furness-fells, Cross-fell.
 Field, an enclosure, a flat piece of land ; as Mans-field.
 Ford, a crossing ; as Hert-ford.
 Glen, a valley ; as Glen-more, Glen-coe.
 Ham, a dwelling place, or home, a village or town ; as Ful-ham, Nottingham-ham, Oak-ham.
 Haven, a harbour of safety ; as New-haven, White-haven.
 Hithe, or hythe, a small haven ; as Queen-hithe, Hythe.
 Holm, a low island, a place liable to floods.
 Hurst, a thicket ; as Mid-hurst, Hurst-pierpoint, Pens-hurst.
 Kirk, a church ; as Fal-kirk, Kirk-wall.
 Lin, a pool, or lake ; as Lin-corn, Dub-lin.
 Llan, a church ; as Llan-daff.
 Mere, a lake ; as Whittlesea-mere.
 Minster, a monastery ; as West-minster.
 Mont, a hill or mountain ; as Pied-mont, Mont-serrat.
 Moor, more, muir, high ground ; as Dart-moor, West-more-land.
 Mouth, from the situation of the town to the river ; as Ports-mouth
 Ply-mouth.
 Ness, a cape, or headland ; as Caith-ness, Dunge-ness, Naze.

Ouse, a river ; as Yorkshire Ouse, Cambridge Ouse.
 Polis, poli, ple, a city or town ; as Tri-poli, Na-ples, Constantino-ple.
 Port, a harbour ; as Devon-port, Port-chester, Port-Patrick.
 Stadt, a town or city ; as Neu-stadt, Darm-stadt.
 Thorpe, a village ; as Bishops-thorpe, Thorpe-Market.
 Ton, a town ; as Brigh-ton, Kings-ton.
 Ville, a town ; as Preston-ville, Abbe-ville.
 Wick, wic, wich, wig, a town situate on a bend of a river, or of the sea coast ; as Aln-wick, Sles-wig, Green-wich, Wick-low.
 Wold, a wood ; as Easing-wold.
 Worth, a farmyard, a country residence ; as Bos-worth.

WRITING (STANDARD V.).

In Standard V., for the first time, composition is required, the subject matter being given. As the "*intelligent reproduction of the story*" is essential to a pass, it may be as well to give some teaching notes on composition ;—in addition, the writer would strongly recommend the teacher to study, and work out with the class, some elementary treatise on English Composition. But, in the first place, it will be necessary that the teacher himself should have some general notions of the essentials of a good style in composition before he can teach these to the class.

Good composition refers to—

A. Clearness ; B. Ornament.

A. *Clearness*, or *Perspicuity*, refers to the choice and arrangement of words to convey clear, definite notions and ideas, and is, therefore, more important than ornament. "*Language which is not intelligible, fails in the same proportion in the purpose for which language is employed.*"—ARISTOTLE. In many compositions ornament would be out of place ; but every author should be clear in his own conceptions, and in the expression of these. "*By perspicuity care is taken, not that the reader may understand if he will, but that he must understand.*"—QUINTILIAN. Long and in-

volved sentences are rarely perspicuous. Perspicuity includes *Purity*, *Propriety*, and *Precision*.

Purity is adhered to when the words, phrases, and constructions idiomatically belong to the language employed ; and is violated when foreign words and constructions are dragged into use ; when pedantic phrases are made use of, instead of plain, forcible Saxon terms.

Propriety rejects the employment of words in a sense different from that in which the best writers use them. It therefore implies the study and imitation of the best authors.

Precision discards a too florid style, by rejecting all superfluous words, especially of adjectives.

B. *Ornament* refers to the—

(1) *Choice of Words.*

(2) *The Construction of Sentences.*

(3) *The use of Figurative Language.*

(1) *Choice of Words.*—In some cases we may safely aim at imitating the sounds to be described, by means of the words employed ; as in Milton's "*grating harsh thunder.*"

(2) *Construction of Sentences.*—These should have *variety* ; some long, some short, to escape monotony. Judicious arrangement of light and shade constitute an important feature in a landscape or picture ; in like manner, sentences properly varied in length and structure bring out reliefs and contrasts in composition.

(3) *Figurative Language* gives the greatest ornament in composition ; but the comparisons made should be natural, and not far-fetched. The images must be interwoven with the subject, and blend smoothly with it. "*I must add, concerning these figures, that as they beautify a composition, when they are reasonably introduced, so they deform it greatly if too frequently sought after.*"—QUINTILIAN.

Style may be made pleasing by means of well-chosen

allusions. "*The great art of a writer shows itself in the choice of pleasing allusions, which are generally to be taken from the greater or more beautiful works of art or nature. The allusions should always be borrowed from what is more known and common than the passages to be explained.*"—SPECTATOR.

Before the exercise in composition is commenced, the teacher should ask questions on the subject matter of the passage read out to the class. This will fix the salient points of it on the memory of the pupil, and teach him "*How to begin,*" which is the great difficulty. In the earliest stages these questions may be written on the black-board, the answers may be written out by the class, and the pupils then required to connect these together into a consecutive narrative.

The following rules must be attended to :—

(1) *Make use of simple Anglo-Saxon terms.* Thus, do not let the children write "*aqueous fluid,*" but water : "*solar luminary,*" but sun ; "*period of existence,*" but life ; "*proceeded to his abode,*" but went home, etc.

(2) *Write short sentences,* otherwise they will become involved.

(3) *Mind the capitals.* These should be used to commence sentences, and rarely elsewhere, except with proper nouns.

(4) *Take care of the punctuation.* The rules for these may be obtained from the grammar-book, and are given on p. 167.

(5) In writing *letters*, let the style be *conversational* and in the *first person*, not forgetting the *place and date* ; the *address* ; *distinct paragraphs* for separate subjects ; the proper form of *conclusion* ; and the *name and residence* of the person written to.

PARAPHRASING.

One of the most valuable helps to composition is *paraphrasing*. This is a translation of ideas from a difficult set of words and constructions into a *simpler* form, and not a mere change of words. Simple terms should certainly never be replaced by more difficult words. In other words, classic terms should be exchanged for Anglo-Saxon.

This exercise (1) tests the pupil's knowledge of the meanings of words; and (2) his power of reproduction. The ideas are already supplied by the author.

Before beginning his task, the pupil should be taught the *meaning* of the passage.

ARITHMETIC (STANDARD V.).

It may be assumed that the teacher is sufficiently skilful to teach Practice in the ordinary way. One point, however, rarely is sufficiently attended to; viz. the proper selection of aliquot parts. Thus, in splitting up 19s. 8d., instead of taking 10s. = £½, 5s. = ½ of 10s., 2s. = ¼ of 10s., and repeating this, we should take 4s. = ½ of £1, and thus save one line.

Again, *subtraction* should be used as well as addition; thus, 999 articles @ £19 19s. 11¼d. = 1000 × £20 - (999 farthings + £19 19s. 11¼d.). Yet children are often allowed to blunder through 10s. = £½, etc., in a most complicated manner. The sum should be worked thus: £20,000 - £20 - 998 farthings (= £19,980 - £1 0s. 9½d.) = £19,978 19s. 2½d.

The unitary method is the simpler in single Rule of Three, but becomes very cumbrous in compound. Moreover, it ignores the theories of ratio or proportion, which are of inestimable service to the arithmetician. Where

ratio is taught, the class should be practised in putting the unknown quantity, x , in any of the places of the four terms. The x can then be found by using the formula, "*The product of the extremes = the product of the means.*" This will greatly simplify the practice with Vulgar Fractions; thus, $\frac{2}{4} = \frac{1}{2}$, may be understood either as a statement of ratio, $2 : 4 :: 1 : 2$; or as an instance of cancelling, or of reduction to the lowest denominator.

In teaching ratio, it is useful to have recourse to lines of various lengths; thus, $2 : 4 :: 1 : 2$; may be represented
 — : ——— :: — : —, or little : big :: little : big.

Great care should be taken that the first and second terms should be of the *same kind*; and similarly with the third and fourth. It is true that the *answer* can be obtained otherwise, but the laws of ratio have been otherwise violated. Thus, in the exercise—

If 3 men earn £48, what will 9 men earn? we might state the terms—

$$3 : 48 :: 9 : x = 144$$

as well as $3 : 9 :: 48 : 144$.

But in the former case, we have instituted a comparison between *men* and *pounds*; instead of between *men* and *men*.

In stating the terms, the children should be taught to perform the following mental processes:—

(1) To put into the *third* place that term which is of the same nature or kind as the answer. In the problem given above, the answer required is in *money*; the £48, therefore, should be put in the third term.

(2) To arrange the first and second terms according as an answer greater or less than the third term is required, *i.e.* from big to little, or from little to big, as the case may be.

It is a useful practice to set down the answer in a

formula before proceeding to cancel, and this remark applies still more to Compound Proportion.

Thus, in the exercise above—

$$3 : 9 :: 48 : x$$

$$x = \frac{9 \times 48}{3} = 3 \times 48 = £144$$

SKETCH OF A LESSON IN PROPORTION.

The rule of proportion is one of the most difficult in arithmetic for a child to learn, and for a teacher to teach. From immaturity of mind it is difficult for the child to understand what is meant by as $1 : 2 :: 3 : 6$, or as $a : b :: c : d$. This is another and a better way of expressing it, $\frac{a}{b} = \frac{c}{d}$.

To help him we may show that four things in groups of two pairs are to be dealt with; represent these first by straight lines, two long and two short; then show that these must be arranged $\text{—} : \text{—} :: \text{—} : \text{—}$, or else $\text{—} : \text{—} :: \text{—} : \text{—}$ (this works up the old notion of direct or inverse proportion). Next take this, as *big : big :: little : little*; this is a *graphic* representation. Next we should take an *arithmetical* one, as $2 : 4 :: 3 : 6$, and give exercises asking for arrangement of four given numbers or quantities.

Next educe from the class in about twelve examples that the product of the “means” is always equal to the product of the “extremes;” also elicit from the class, giving four terms always, that the second term is always as many times greater or less than the first as the fourth is greater or less than the third. If this be done skilfully with low numbers, the teacher will find that when he has set down three terms the class will readily give the fourth without any formal rule.

We should next proceed to teach this formally, as in the
PART II. s

following example, $2 : 4 :: 3 : 6 \therefore 4 \times 3 = 2 \times 6$; if, therefore, 6 be dropped out and last term written in its place, our series stands, $2 : 4 :: 3 : \text{last term}$ \therefore as before $4 \times 3 = 2 \times \text{"last term,"}$ \therefore last term $= 4 \times 3 \div 2$, out of this get the rule, viz. multiply second and third terms together and divide by first; to complete this let x take the place of "last term."

Although the fourth term is the one most often asked for, yet it is useful to be able to find first, second, or third. $1 : 2 :: 3 : 4$ or $\frac{1}{2} = \frac{3}{4}$ (mind here, 1, 2, 3, 4, only mean first, second, third, or fourth terms), $\therefore 1 = 2 \times 3 \div 4$, or if $\frac{a}{b} = \frac{c}{d} \therefore a = \frac{b \times c}{d}$ for first term; so again, $\therefore bc = ad \therefore b = \frac{ad}{c}$; so again, $\frac{a}{b} = \frac{c}{d} \therefore c = \frac{ad}{b}$.

In addition of Vulgar Fractions too little recourse is had to grouping; thus teachers proceed on the following lines:—

$$\begin{array}{rcl} & \frac{1}{2} + \frac{1}{4} + \frac{3}{7} + \frac{4}{21} = & \\ \text{L. C. M. } 84 & \frac{42 + 21 + 36 + 16}{84} = & \text{etc.} \\ \text{Instead of, } \frac{3}{4} + \frac{13}{21} = & \frac{63 + 52}{84} = & \text{etc.} \end{array}$$

This becomes very important when more difficult examples are given.

MENTAL ARITHMETIC (STANDARD V.).

"Practice, Bills of Parcels, and Simple Proportion;"
"Proportion, Vulgar Fractions."

Aliquot Parts.

I. To find the value of 1 lb. avoirdupois, at — per oz.
Rule.—Reckon the farthings as shillings, and divide by 3.

Find the value of 1 lb. avoirdupois at sight at per oz.—

d.	d.	d.	d.	s.	d.	s.	d.
$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1		$1\frac{1}{4}$		$1\frac{1}{2}$
$1\frac{3}{4}$	2	$2\frac{1}{2}$	3		4		5
$10\frac{1}{2}$	$11\frac{1}{4}$	$11\frac{1}{2}$	$11\frac{3}{4}$	1	$3\frac{1}{2}$	2	$11\frac{1}{2}$

II. 2 lbs. @ $3\frac{1}{2}d.$; 3 @ $4\frac{1}{4}d.$; 4 @ $5\frac{1}{2}d.$; 5 @ $6\frac{1}{2}d.$; 6 @ $10\frac{1}{2}d.$; 7 @ $11\frac{1}{4}d.$; 8 @ 1s. $1\frac{1}{2}d.$; 12 @ 1s. $3\frac{1}{4}d.$

III. Reversely to find the price per oz. at — per lb. avoirdupois. Multiply by 3, and reckon shillings as farthings.

Find the cost of 1 oz. at per lb. at sight—

£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
	2	0		1	4		2	8		3	6
	4	8		5	10		5	4		6	8
	8	4	1	4	0	1	6	8		10	8
1	8	0	1	4	8	1	16	0	2	14	0

IV. To find the value of a lb. at — per cwt. *Rule.*—The price in shillings multiplied by 3 and divided by 7 gives price of 1 lb. in farthings.

Find value per lb. at following prices per cwt at sight—

£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1	8	0	1	15	0	2	2	0	2	9	0
2	16	0	3	3	0	3	10	0	3	17	0
4	4	0	4	11	0	7	14	0	11	13	4

By use of Table of Aliquot Parts.

V. Price of 64 articles at sigh —

s.	d.	s.	d.	s.	d.	s.	d.
10	0	6	8	5	0	4	0
3	4	2	6	2	0	1	8
1	4	1	3	1	0		6

VI. Find price of 364 articles at sight at—

6d. 4d. 3d. 2d. 1½d. 1d.

VII. To find cost of following at £1 6s. 8d. per ton—

10 cwt. 5 cwt. 4 cwt. 2 cwt. 1 cwt. 2 qrs.

VIII. To find price of following at 12s. per cwt—

2 qrs. 3 qrs. 1 qr. 14 lbs. 7 lbs. 16 lbs.

IX. To find price of following at 16s. per lb. avoirdupois—

8 oz. 4 oz. 2 oz. 6 oz. 12 oz. 1 oz.

X. To find price of following at 24s. per acre.

2r. 1r. 3r. 32p. 20p. 10p.

Cancelling for Proportion.

XI. Even numbers are divisible by 2. (2 will cancel.)

If the last two figures are divisible by 4, 4 will cancel.

If the number ends in 0 or 5, 5 will cancel.

If the last 3 figures are divisible by 8, 8 will cancel.

Final 0's will cancel.

Whether 3, 7, 9 will cancel can be best found by trial.

If the same figure is found in three places running in the whole number, it will cancel by 3, 37, and 111; as 555, 666, etc.

XII. Find the factors of—

84	96	360	336	378
429	504	616	714	840
944	990	1602	2475	777

XIII. The three first terms in proportion being given to find the fourth. *Rule.*—Multiply 2nd and 3rd, and divide by 1st (cancel in 1st and 2nd, or 1st and 3rd).

4, 8, 9	5, 10, 8	3, 12, 18
7, 21, 13	8, 48, 5	19, 17, 38
15, 45, 12	81, 36, 45	38, 19, 17

XIV. If 5 yards cost £1 10s., what will 15 cost?

What is the rent of 96 acres at £3 4s. for 16?

What is the cost of 72 horses if 9 cost £3 15s.?

How much bread will 49 men eat if 7 eat 6078 loaves?

What is the cost of 37 cows if 111 cost £3 15s.?

What is the cost of 73 horses at £219 for 3?

CHAPTER XIX.

CLASS SUBJECTS (STANDARD V.).

ENGLISH.—“ *To recite 100 lines from some standard poet, and to explain the words and allusions.*” (New Code, 1883.)

“ *To parse and analyze simple sentences, and to know the method of forming English nouns, adjectives, and verbs from each other.*” (New Code, 1883.)

“ *The children should be taught to form sentences illustrating the use of the various parts of speech, and the application of grammatical principles learned.*”

GEOGRAPHY.—“ *Geography of Europe, physical and political ; Latitude and longitude ; Day and night ; The seasons.*” (New Code, 1883.)

[Maps and diagrams may be required.]

ELEMENTARY SCIENCE.—“ (a) *Animal or Plant life ;* (b) *The chemical and physical principles involved in one of the chief industries of England, among which agriculture may be reckoned ;* (c) *The physical and mechanical principles involved in the construction of the commoner instruments, and of the simpler forms of industrial machinery.*” (New Code, 1883.)

HISTORY.—“ *If this be taken, a graduated scheme of teaching it must be submitted to the Inspector, and approved by him at the previous inspection.*”

NEEDLEWORK. (See Standards I. and II.)

- (1) *To turn down a hem $\frac{3}{4}$ inch wide, to fix two tucks 5 inches long, and to run at least half of one.*
- (2) *To put in a calico patch 2 inches square.*
- (3) *To cast on 25 loops, and with two needles knit the heel of a stocking, turn it, and cast off.*
- (4) *To cut out and tack together the pattern of a pinafore for a child, and to cut out and work a button-hole.*
- (5) *To plain darn a hole in stocking material, and mark on coarse calico or linen a letter chosen by the Inspector.*
- (6) *To sew and fell together 1 inch of two pieces of calico, and to put in a gusset as for the body of a shirt and stitch it across.*

Materials required.

- (1) *A piece of calico 5 inches square.*
- (2) *A piece of calico 5 inches square, and a piece 2 inches square.*
- (3) *A pair of knitting-pins and cotton or wool.*
- (4) *A piece of tissue or lined paper about one square yard, and a piece of calico 3 inches square.*
- (5) *A piece of stocking material 3 inches square, and a piece of calico or linen 3 inches square.*
- (6) *Two pieces of calico 5 inches by $2\frac{1}{2}$, and one piece for gusset, square or triangular.*

ENGLISH.

Formation of Nouns, Adjectives, and Verbs.

[For Parsing and Analysis, see preceding Standard.]

This is a new requirement, and will therefore want special attention on the part of the teacher.

The following nouns are related to verbs, and will suggest others formed in like manner. Only one of each type is given; the teacher should himself make out a list of others.

I. *Nouns from Verbs.*

Endings.	Verbs.	Nouns.	
(1) <i>er</i> }	sail	sailer	These denote agents or doers.
<i>yer</i> }	law	lawyer	
(2) <i>or</i>	sail	sailor	
(3) <i>ar</i>	lie	liar	
(4) <i>ant</i>	occupy	occupant	
(5) <i>ent</i>	respond	respondent	
(6) <i>ster</i>	spin	spinster	
(7) <i>ee</i>	devote	devotee	
(1) <i>ment</i>	banish	banishment	State.
(2) <i>ure</i>	please	pleasure	
(3) <i>ence</i> }	infer	inference	
<i>ance</i> }	accord	accordance	
(4) <i>age</i>	pass	passage	
(5) <i>art</i>	brag	braggart	
(6) <i>ing</i>	write	writing	
(7) <i>ery</i>	brew	brewery	
(8) <i>al</i>	try	trial	

II. *Nouns from Adjectives.*

Endings.	Adjectives.	Nouns.	
(1) <i>ness</i>	dark	darkness	These denote state or quality.
(2) <i>dom</i>	free	freedom	
(3) <i>tude</i>	long (root)	longitude	
(4) <i>ty</i>	novel	novelty	
(5) <i>y</i>	jealous	jealousy	
(6) <i>acy</i>	accurate	accuracy	

	Endings.	Verbs.	Nouns.	
(7)	<i>ance</i>	fragrant	fragrance	These denote state or quality.
(8)	<i>ence</i>	excellent	excellence	
(9)	<i>ency</i>	excellent	excellency	
(10)	<i>ard</i>	drunk	drunkard	
(11)	<i>ation</i>	moderate	moderation	
(12)	<i>ery</i>	brave	bravery	
(13)	<i>eur</i>	grand	grandeur	
(14)	<i>th</i>	dear	dearth	

III. *Nouns from Nouns.*

	Endings.	Nouns.	Nouns.	
(1)	<i>dom</i>	duke	dukedom	These denote office.
(2)	<i>ship</i>	friend	friendship	
(3)	<i>ate</i>	protector	protectorate	
(4)	<i>acy</i>	democrat	democracy	
(5)	<i>eer</i>	mountain	mountaineer	
(6)	<i>age</i>	leaf	leafage (state)	
(7)	<i>hood</i> }	man	manhood	Diminu- tives.
	<i>head</i> }	god	godhead	
(8)	<i>ary</i>	mission	missionary	
(1)	<i>y</i>	babe	baby	
(2)	<i>ock</i>	hill	hillock	
(3)	<i>ling</i>	seed	seedling	
(4)	<i>let</i>	eagle	eaglet	
(5)	<i>cule</i> }	animal	animalcule	
	<i>cle</i> }	part	particle	
(6)	<i>kin</i>	lamb	lambkin	
(7)	<i>en</i>	chick	chicken	
(8)	<i>an</i> }	library	librarian	
	<i>ian</i> }	grammar	grammarian	
	<i>ean</i> }	Europe	European	
(9)	<i>ist</i>	botany	botanist	
(10)	<i>ism</i>	hero	heroism	

IV. *Adjectives from Nouns.*

	Endings.	Nouns.	Adjectives.
(1)	<i>ful</i>	joy	joyful
(2)	<i>ly</i> }	man	manly
	<i>like</i> }	man	manlike
(3)	<i>y</i>	wealth	wealthy
(4)	<i>ous</i>	glory	glorious
(5)	<i>ical</i> }	poet	poetical
	<i>ic</i> }	angel	angelic
(6)	<i>ine</i>	river	riverine
(7)	<i>ile</i>	infant	infantile
(8)	<i>en</i> }	gold	golden
	<i>n</i> }	leather	leathern
(9)	<i>al</i>	autumn	autumnal
(10)	<i>ate</i>	passion	passionate
(11)	<i>ish</i>	fool	foolish
(12)	<i>esque</i>	picture	picturesque
(13)	<i>less</i>	penny	penniless
(14)	<i>ward</i>	home	homeward

V. *Adjectives from Verbs.*

	Endings.	Verbs.	Adjectives.
(1)	<i>ive</i>	construct	constructive
(2)	<i>able</i>	comfort	comfortable
(3)	<i>ant</i> }	abound	abundant
	<i>ent</i> }	prevail	prevalent
(4)	<i>ing</i>	will	willing
(5)	<i>ite</i>	favour	favourite

VI. *Adjectives from Adjectives.*

	Endings.	Adjectives.	Adjectives.
(1)	<i>some</i>	weary	wearisome
(2)	<i>ern</i>	south	southern

	Endings.	Verbs.	Adjectives.
(3)	<i>fold</i>	two	twofold
(4)	<i>teen</i>	six	sixteen
(5)	<i>ty</i>	six	sixty
(6)	<i>wise</i> }	other	otherwise
	<i>ways</i> }	side	sideways
(7)	<i>ish</i>	thin	thinnish
(8)	<i>most</i>	upper	uppermost
(9)	<i>ward</i>	north	northward

VII. *Verbs from Nouns.*

	Endings.	Nouns.	Verbs.
(1)	<i>en</i>	strength	strengthen
(2)	<i>ize</i>	idol	idolize
(3)	<i>ate</i>	alien	alienate
(4)	<i>fy</i>	beauty	beautify

Besides these are many others, the formation of which is obscured by their classic origin, and, as without a knowledge of this the teacher cannot teach the use even of the endings, a list of the Latin words most used in English composition is appended for his use.

In *good* schools the class can be taught these.

Sometimes, instead of learning the classic forms (as *amo*, I love) the *root form* only is adopted by the teacher as *am*; and a great deal may be done with these root forms by the children if properly handled by the teacher.

LATIN ROOTS.—Among the Latin words which furnish the largest number of English words are the following, with their derivatives and their meanings :—

Ago—I do; *actum*—done, supine (like our perfect participle); to act, drive, lead; as, *action*, a doing; *agent*, a doer; *agile*, able to act quickly; *coagulate*, driving together.

Amo—I love; as, *amatory*, loving; *amiable*, loveable; *amity*, love; *amateur*, a lover.

Amicus—a friend; as, *amicable*, friendly; *inimical*, unfriendly.

Annus—a year; as, *annual*, yearly; *annals*, yearly records; *annuity*, yearly sum; *anniversary*, yearly celebration; *biennial*, twice a year; *triennial*, thrice a year; *millennium*, a thousand years.

Audio—I hear; as, *audience*, a hearing assembly; *auditory*, belonging to the ear.

Cado—I fall; *casum*. *Cadence*, a falling sound; *cascade*, falling water; *decay*, fall down.

Candeo—to glow or be bright. *Candour*, unsullied brightness; *candle*, a source of brightness; *chandelier*, candle-holder.

Cano, canto—I sing. *Cant*, singing whine; *chant*, a song; *canticle*, little song; *canto*, part of song or poem; *chanticleer*, singing bird (cock); *incantation*, charming song.

Capio—I take; *cepi*—I took; *capitum*—taken. *Accept*, take to; *anticipate*, take before; *capable*, able to take; *captive*, one taken; *capture*, to take; *conceive*, taken together; *except*, taken out; *receive*, take back.

Caput, capitis—the head. *Cap*, head covering; *capital*, head city or head of a column; *capitation*, head tax; *captain*, head officer; *chapter*, head of cathedral, or in a book; *decapitate*, take off the head; *recapitulate*, give the heads again.

Cedo, cesso—I go, or give up. *Accede*, to go to; *recede*, go from; *concede*, go together; *precede*, go before; *proceed*, go forward; and all the nouns derived from these—*accession*, *recession*, *concession*, *precession*, *procession*.

Claudo, clausum—I shut up. *Clause*, a phrase shut up or complete; *closet*, a shut up place; *conclude*, shut up together; *recluse*, one shut away; *exclude*, shut out; *secluded*, shut apart.

Colo, cultum—I till. *Cultivate*, to till; *agriculture*, field tillage; *colony*, a band to till, or the place of tillage.

Curro, cursum—I run. *Course*, a place of running, or running itself; *courier*, a runner before; *concourse*, a running together; *current*, a running stream; *curricule*, a running vehicle; *discursive*, running away from; *excursion*, a running out of; *incur*, to run on; *recur*, to run back; *succour*, to run under (to support or bear up).

Dico, dixi, dictum—I say, speak, tell. *Diction*, speaking; *dictionary*, vocabulary of speech; *indicate*, to speak on or about; *predict*, to say before; *verdict*, a true saying (*verus*—true).

Do, dedi, datum (compounded into *ditum*)—to give. *Datum*, something given; *date*, given time; *addition*, that which is given together.

Duco, duxi, ductum—I lead or draw. *Aqueduct*, that which leads or conducts water (*aqua*—water); *ductile*, easily drawn; *conduce*, lead together; *deduce*, lead down; *produce*, lead forth; *reduce*, lead or bring back; *induce*, to lead on; *educe*, lead out (*ex*—out of); *dux* and *duke*, a leader; *educate*, draw out.

Emo, emptum—I buy. *Emption*, buying; *redeem*, buy back.

Ens—being; as, *absence*, being away from; *presence*, being before or with; *entity*, being.

Facio, feci, factum (compounded into *factum*)—I do, make. *Bene*—

faction, well doing; *benefit*, good deed; *fact*, a deed; *fashion*, that which is done; *feasible*, easily done; *feat*, a deed; *perfect*, done well.

Fero, latum—I bear, carry. *Circumference*, that which is carried round; *collate*—confer, bring together; *defer*, carry down; *refer*, carry back; *infer*, carry on; *ferry*, where one is borne; *suffer*, bear under; *transfer*, carry across; *lucifer*, light-bearer.

Folium—a leaf. *Foil*, a leaf; *folio*, leaf of book; *portfolio*, that in which leaves are carried; *trefoil*, three-leaved; *interfoliated*, with leaves between; *foliage*, leafage; *exfoliate*, to strip off leaves.

Fons, fontis—a fountain; as, *font* and *fount*, a fountain. (Compare *mons*—a mountain, with *mont*—mount; and *pons*—a bridge, with *pont*, transpontine.)

Fundo, fusum—I pour; as *confound*, pour or mix together; *foundry*, where metals are poured out; *refund*, pour back.

Genus, plural *genera*—kind. *Congenial*, kind together, of same kind; *gentle*, *gentle*, *gentile*, having a kind, race, or ancestry; *degenerate*, from one's kind or race.

Gradior, gressus—I step. *Grade*, step; *gradual*, step by step; *graduate*, go step by step; *congress*, stepping together; *degrade*, stepping down; *digress*, stepping away; *retrograde*, stepping back; *transgress*, stepping beyond.

Gratia—free gift. *Grace*, *gratuity*, *gratis*—free gift; *gracious*, full of free gifts.

Gravis—weighty, severe. *Gravity*, weight; *grave*, weighty; *aggravate*, *aggrrieve*—to make severe; *grief*, heaviness.

Grex, gregis—a flock. *Aggregate*, *congregate*—flock together; *egregious*, picked out of a flock, so peculiar; *gregarious*, flocking together; *segregate*, take out of a flock.

Hospes, hospitis—a guest. *Hospital* (contracted into *hotel* and *spital*), guest-house; *host* and *hostler*, entertainer of guests.

Jacio, jeci, jactum (compounded into *jectum*)—I throw. *Abject*, thrown away; *adjective*, thrown to (a noun); *dejected*, thrown down; *interjection*, thrown between (speech); *projectile*, something thrown forward.

Jungo, junxi, junctum—I join. *Adjunct*, thrown to; *conjunct*, thrown together.

Locus—place. *Locale*, *locality*—a place; *local*, belonging to a place; *locomotive*, that which moves from place to place.

Maneo—I remain. *Mansion*, abode in which to stay; *permanent*, remaining through; *remnant*, remaining behind.

Merc—merchandise. *Mercer* and *merchant*, a dealer in merchandise; *mercantile*, belonging to merchandise; *mercenary*, for sake of merchandise or reward; *commerce*, trade in merchandise.

Mitto, misi, missum—I send. *Demit*, send down; *remit*, send back; *commit*, send together; *intromit*, send between; *dismiss*, send away; *permit*, send through; *submit*, send under; *mission*, missionary—party sent.

Moveo, motum—I move. *Move*; *remove*—move back; *remote*, moved back; *motion*, *commotion*—moving.

Natus—born. *Natal*, belonging to birth; *native*, one born in a country; *nature*, that which gives birth to life; *cognate*, born together, kindred; *preternatural*, beyond nature, miraculous; *innate*, born in, or inborn.

Navis—a ship. *Navigate*, to steer a ship; *naval*, belonging to ships.

Norma—a rule. *Normal*, belonging to rule; *abnormal*, beyond rule; *enormous*, out of rule or measure.

Nosco, notum—I know. *Note*, that which is known; *notice*, to make known; *notion*, what we know; *denote*, make known; *notary*, lawyer who makes us to know; *connoisseur*, one who knows.

Oro—I pray or beg. *Adore*, to pray to; *inevorable*, not to be moved by prayer; *oracle*, that to which we pray; *oration, orison*—a prayer or speech.

Par—equal. *Peer, pair*—equals; *peerless*, without an equal; *parity*, equality; *nonpareil*, not to be equalled.

Pars, partis—a part or share. *Partial*, belonging to a part or side; *parcel, particle*—a little part or share; *particular*, belonging to very little portions; *parse*, to divide speech into parts; *partner*, one who takes a part.

Peto, petitum—I seek. *Repeat*, seek again (and again); *compete*, seek with (others); *petition*, a seeking; *petulant*, seekingly.

Plango—to lament. *Complain*, lament together; *complaint, plaint*—that by which we lament; *plaintiff*, one who laments; *plaintive*, lamentingly.

Plico—fold, bend. *Apply*, bend oneself to; *applicant*, one who bends to a task; *explicit*—unfolded, straight; *implicit*, folded in, crooked; *pliant*, bendable; *pliers*, tools for bending; *reply*, bend speech back; *supplicate*, bend under.

Pono, posui, positum—I place, lay. *Composer*, one who puts words together; *compositor*, one who puts type together; *deponent*, one who lays down (a statement); *deposit*, that which is laid down; *depôt*, the place where something is put; *expose*, to lay out; *propose*, put forward; *repose*, lay back; *suppose*, put under.

Posse, potens—to be able. *Possible, potent, potential*—that which is able to be; *plenipotentiary*, one fully able (*plenus*—L. full); *impotent, unable*.

Prehendo, prehensum—I lay hold of, seize. *Apprehend*, to seize physically or mentally; *comprehend*, to take together; *reprehend*, take down or blame.

Primus—first. *Primary*, belonging to the first; *Primate*, first of the Bishops; *prime*, the first or chief; *primer*, first book.

Quadra—a square. *Quadrant*, square angle (90°); *quadratic*, square equation; *quadrille*, dance of four; *quadrumana*, "four-handed" beasts; *squadron*, square body.

Quies—rest, peace. *Quiescence, quiet*—rest; *acquiesce*, to rest in; *requiem*, service for peace of dead.

Rapio, raptum—I snatch. *Rape, rapine*—snatching away in war;

rapid, in a snatching, quick way; *rapture*, physical or mental snatching away.

Rego, rectum—I rule. *Regal*, belonging to rule; *reign*, a time of rule; *rector*, a ruler; *region*, a place of rule; *regimen*, rule of life; *correct*, rule together.

Scribo, scriptum—I write. *Scribe*, a writer; *describe*, write down; *inscribe*, write in; *subscribe*, write under (a name); *scrip*, written on paper money; *nondescript*, not to be written; *ascribe*, write to; *prescribe*, write beforehand; *scribble*, *scripture*, writing.

Seco, sectum—I cut. *Bisect*, cut twice; *trisect*, cut thrice; *dissect*, cut asunder; *insect*, cut into (halves); *intersect*, cut between; *section*, a cutting.

Sequor, secutus—I follow. *Consecutive*, *consequent*, *consequential*—following together; *ensue*, to follow on; *pursue*, to follow forward; *sequel*, that which follows; *sequent*, following.

Similis—like. *Dissemble*, make unlike; *resemble*, to liken back (to type); *similar*, like; *similitude*, likeness; *simulation*, pretence to likeness.

Solvo, solutum—I loosen, melt, pay. *Absolve, dissolve*—loosen from; *absolute*, loosened from (another's will); *resolve*, loosen again (so free); *dissolute*, loosened from (virtue); *insolvent*, not loose (from debt); *soluble*, easily loosened or melted.

Specio (spicio), spectrum—I see. *Spectacle, spectre*—a sight; *despise*, look down on; *aspect*, the sight or appearance; *circumspect*, looking round on all sides; *suspect*, look underneath.

Spiro—I breathe. *Spirit*, breath (of life); *aspire*, breathe up to; *aspirate*, a breathing letter (*h*); *conspire*, breathe (vows) together; *expire*, breathe out (life); *inspire*, breathe in; *respire*, breathe back again; *spirit* and *sprite*, that which breathes or lives.

Spondeo, sponsum—I answer. *Sponsor, spouse*—one who answers; *respond*, answer back; *despond*, answer down (in grief); *correspond*, to answer (letters) back together; *responsible*, able to give answer.

Sto, statum (compounded into *stitum*)—I stand, or place. *Circumstance*, that which stands round or about; *constant*, standing together; *extant*, standing out or remaining; *instant*, standing in or near; *interstice*, standing between; *obstacle*, standing against; *solstice*, the standing of the sun (*sol*—the sun); *station*, standing place; *statue*, standing image.

Stringo, strictum—I bind; as, *strict*, fast bound; *astrigent*, binding; *constriction*, binding together.

Struo, structum—I build or set up; as, *construe, construct*—to set together; *destruction*, unbuilding or setting down; *instruct*, build in; *instrument*, means of building or setting up; *structure*, a building.

Surgo, surrectum—I rise up; as, *insurgent*, one who rises up (in revolt); *insurrection*, a rising; *surge*, a rising wave; *surging*, rising.

Tendo, tensum, tentum—I stretch; as, *attention, attendance*—that which stretches to its object; *contend*, stretch together; *intend*, stretch (mentally) on or towards; *portent*, that which stretches forward (to the future); *pretend*, stretch forward (beyond reality);

tendon, means of stretching a limb; *tense*, stretched; *tentacles*, feelers stretched out.

Teneo, tentum—I hold; as, *abstinent*, holding away from; *contain*, *continue*—hold together; *retain*, hold back; *detain*, hold down; *entertain*, hold among; *impertinent*, not holding on (to subject of debate); *pertinacity*, holding on thoroughly; *tenant*, holder of house; *tenement*, a holding; *tenet*, doctrine held; *tenure*, holding of land; *tendril*, that by which a plant holds.

Terra—the earth, land; as, *interment*, placing in earth; *Mediterranean*, sea in the middle of the earth (according to old geographical notions); *terrestrial*, belonging to the earth; *territory*, land; *terrier*, an unearthing dog.

Testor, testatus—bear witness; as, *attest*, to witness to; *contest*, to bear witness together (against each other); *detest*, to bear witness against; *intestate*, without witness of a will; *testament*, a witnessed will; *testimonial*, that which bears witness (of good will).

Torqueo, tortum—to twist; as, *contortion*, a twisting in pain; *dis-tort*, twist asunder; *retort*, twist back; *torment*, *torture*—pain that twists; *tortuous*, twisting.

Traho, tractum—I draw. *Abstract*, drawn from; *contract*, draw together; *detract*, draw down; *retract*, draw back; *subtract*, draw from under; *portrait*, drawing; *retreat*, withdrawal; *tractable*, easily drawn; *trace*, a drawing; *train*, that which is drawn; *treaty*, a drawn up agreement; *subtrahend*, that which is drawn from.

Venio, ventum—I come; as, *advent*, *adventure*—coming to; *circum-vent*, come round; *convent*, *convention*, *conventicle*—place to come together; *event*, that which comes out; *invent*, to come on (a thing); *prevent*, come before ("Prevent us, O Lord, in all our doings, with Thy continual favour"); *revenue*, that which comes back (to the state); *supervene*, to come between.

Verbo, verbum—I turn. *Advert*, turn to; *avert*, turn from; *convert*, turn together; *revert*, turn back; *divert*, turn asunder; *controvert*, turn against; *invert*, turn in; *evert*, turn out; *pervert*, thoroughly turn; *obvert*, turn against; *transverse*—turned across; *inadvertent*, not turned towards; *versatile*, easily turned.

Video, visum—I see or look. *Provide*, foresee; *revise*, look back on; *supervise*, look over; *visage*, the sight (and thence the whole face); *vision*, sight.

Voco, vocatum—I call. *Provoke*, call forth; *vocal*, calling (ad-jective); *vocation*, calling (noun); *advocate*, one who calls to.

Volvo, volutum—I roll. *Convolve*, roll together; *devolve*, roll down; *evolve*, roll out; *involve*, roll in; *revolve*, roll back; *voluble*, easily rolled; *volume*, roll of writing.

Voveo, votum—I vow; as, *devoted*, *devout*—vowed to; *vote*, a vow or suffrage; *votive*, belonging to a vow; *votary*, one vowed to.

Of these twelve furnish on an average 200 English words each.

AFFIXES.—The following affixes have similar meanings and uses in words derived from Anglo-Saxon, Latin, and Greek respectively :—

	ANGLO-SAXON.	LATIN.	GREEK.	MEANING.
1	<i>less</i> —homeless <i>un</i> —undo	<i>in</i> —infrequent	<i>a</i> —atheist	without
2	<i>ish</i> —blackish	<i>escent</i> —putrescent <i>sub</i> —subtropical	<i>oid</i> —rhomboid <i>oidal</i> —spheroidal	rather
3	<i>ful</i> —restful <i>ed</i> —learned <i>y</i> —bony <i>ard</i> —sluggard <i>art</i> —braggart <i>fold</i> —manifold <i>some</i> —wholesome	<i>ous</i> —grievous <i>ious</i> —pretentious <i>eous</i> —aqueous <i>ose</i> —grandiose <i>lent</i> —fraudulent <i>ile</i> —servile <i>ate</i> —situate	none	full
4	<i>like</i> —godlike <i>ly</i> —godly	<i>esque</i> —picturesque <i>an</i> —urban <i>ane</i> —urbane <i>al</i> —rustical <i>il</i> —civil <i>ile</i> —fertile <i>ar</i> —stellar <i>ine</i> —feline	<i>ic</i> —angelic <i>ical</i> —angelical <i>an</i> —cosmopolitan <i>ean</i> —Pythagorean	like
5	<i>en</i> —golden <i>en</i> —{whiten enable <i>en</i> —maiden	<i>fy</i> —magnify	<i>ine</i> —cedrine <i>ize</i> —civilize	made of to make little
6	<i>et, let</i> —pocket, streamlet <i>ock</i> —bullock <i>et, le</i> —satchel, little <i>ling</i> —gosling <i>erel</i> —cockerel	<i>ul, ule, le</i> —animal- cule <i>et, ette</i> —rosette <i>icule, icle</i> —particle <i>et, et</i> —frontlet		diminu- tives
7	<i>ern</i> —southern <i>ward</i> —southward	—	—	direction
8	<i>ing</i> —loving <i>ed, d, t</i> —beloved	<i>ent, ant</i> —fervent <i>id</i> —fervid	—	condition
9	<i>able</i> —loveable	<i>able</i> —amiable <i>ible</i> —visible <i>ive</i> —pensive <i>ic</i> —terrific	<i>ic</i> —cathartic	able
10	<i>ar</i> —liar <i>er</i> —sailer <i>or</i> —sailor <i>yer</i> —sawyer <i>ster</i> —panster	<i>or</i> —factor <i>ary</i> —visionary <i>ent</i> —student <i>ist</i> —herbalist <i>trix</i> —executrix	<i>ist</i> —physicist <i>ian</i> —physician	agent

	ANGLO-SAXON.	LATIN.	GREEK.	MEANING.
11	<i>age</i> —bondage <i>dom</i> —kingdom <i>hood</i> —manhood <i>head</i> —godhead <i>ness</i> —goodness <i>ship</i> —lordship	<i>age</i> —courage <i>ment</i> —sacrament <i>ance</i> —vigilance <i>ence</i> —patience <i>ude</i> —magnitude <i>ice</i> —service	<i>ism</i> —Platonism <i>y</i> —tautology	state
12	<i>ry</i> —foundry	<i>ium</i> —sanatorium <i>chre</i> —sepulchre	<i>re</i> —theatre	place
13	<i>a</i> —aboard	<i>in</i> —inter <i>contra</i> —contravene <i>circum</i> —circumvent <i>ambi</i> —ambient	<i>epi</i> —epidemic <i>en</i> —endemic <i>anti</i> —antichrist <i>peri</i> —perimeter <i>amphi</i> —amphibious	on against round
14	<i>al</i> —always	<i>omni</i> —omnipresent	<i>pan</i> —pantheist	all
15	<i>back</i> —backslide	<i>retro</i> —retrograde	<i>meta</i> —metaphor	back
16	<i>over</i> —overdone	<i>extra</i> —extramural	<i>hyper</i> —hyperbole	over
17	<i>down</i> —downwards	<i>de</i> —depend	<i>cata</i> —cataract	down
18	<i>fore</i> —foretell	<i>pre</i> —prepare <i>ante</i> —antedate <i>pro</i> —proceed <i>pur</i> —pursue	<i>pro</i> —prophet	before
19	<i>N'</i> —n'one	<i>ne</i> —nefarious		not
20	<i>through</i> —thoroughly	<i>per</i> —perfect	<i>dia</i> —diagonal	through
21	<i>under</i> —underside	<i>sub</i> —subaqueous	<i>hypo</i> —hypocritical	under
22	<i>wel</i> —welfare	<i>bene</i> —benevolent	<i>eu</i> —euphony	well
23	<i>with</i> —withhold	<i>re</i> —resist <i>ob</i> —obvious <i>contra</i> —contravene	<i>anti</i> —antichrist	against

ENGLISH OR SAXON PREFIXES.

A, at, to, or on ; as, afoot, aboard, afield, abed, afloat, a-fishing ("I go a-fishing"), asleep (*i.e.* on sleep—see, "He fell on sleep").

A, making an intransitive verb transitive, as wake, awake.

Be = by ; as, beside (by the side of), because (by or from the cause).

Be, has an intensive meaning ; as, besprinkle, bespeak, bedaub, bedew, bepraise, bespatter, etc.

En, compounded into *em* before *b* and *p*, as embark, embitter, embroil, empower, means in or into ; or to make, as enrich, enlarge, envenom, enable.

"Enable with perpetual light
The dulness of our blinded sight."

For, has negative or prohibitive sense; as forswear, forbid, forget, forbear.

Fore, before, in time; as foretell, foresee, forewarn, foredoom, forestate.

Fore, before, in place; as for(e)ward, further (the comparative of fore).

In, compounded into *im* before *b* and *p*, another form of *en* and *em*, to make; as imbitter (also embitter), innovate, imperil.

Mis, not or error; as mistake, misbehave, mislead, misshapen.

N, a negative particle; as never, nought, neither.

Out, beyond; as outreach, outvie, outgoing, outcome, outgrowth.

Over, beyond; as overreach, overload, overbear, overrule.

To, in the direction of; as towards, together.

Un, not; as unseemly; generally used with adjectives.

Un, used with verbs, gives the opposite meaning to the verb without it; as untie, unlock, unbind, undo. In unloose, the *un* would seem a form of *en*—to make.

Under, beneath or under; as underrate, underground, underneath.

Up, implies ascent; as uprise, upspring, upland, upshot.

With, from or against; as withdraw, withstand, withhold.

THE POWER OF SELF-INTERPRETATION OF WORDS.

Words have a power of SELF-SUGGESTION or SELF-INTERPRETATION, and the cultivation in the child of the power of reading the inscriptions of these lingual coins should be attended to. For example, a common sentence is "James III. was a student and a recluse." If we merely told a child that a recluse meant one who separated himself from others, we gave the meaning, but no way of remembering; we did not make him look at the inscription borne by the word itself, viz. that *recluse* meant one who *closed* or kept himself apart from others. If we did so, every time he saw the word in future it would itself tell its own tale, and the inscription would be read, and the meaning permanently retained by simple sight. In the same way many other examples point out the power of self-interpretation in words—as *council*, a number of persons *called together*; to *aver*, to tell the *very thing*;

depreciate, to bring down the *price* or value of anything; a *foible*, a feeble point in any one; worship = worthship; king = knowing = Canning, or the knowing, able man; idols, are things seen, *i.e.* symbols of the unseen; duke is dux = leader. We used the power in obvious words, as in *handle*; we should use it in less obvious but equally real cases, as in *hilt*, that which is *held*—*haft*, that which we have in the hand. So we should connect *fault* with *fail*, *mediator* with *middle*, *publish* with *public* and *people*, *prolix* with *lax* and *loose*, and the like. Technical words equally revealed their meaning when rightly looked at. We should associate *quadrant* with *quarter*, *radicle* with *root*, *stamens* with *stand*, *molars* with *mill*, *contagion* with *contact*, *pistil* with *pestle*, from its shape, etc.

It is most desirable to teach pure etymology and philology in our schools. We have a means of utilizing the best conclusions of philosophy, by the use of words *inside the language itself*; it is a kind of etymology within the language by means of known words, simple and easily understood, which do the work of the foreign and more difficult roots. It matters not from what sources the original words come, however difficult and distant; we use *representatives* of these in English, and get an advantage almost equal to a knowledge of the foreign tongues from which they were derived.

The root conceptions thus suggested by the words themselves are not *all* that should be taught the child; they are merely the *bases* on which to build the real meaning of the word as used in any passage, and all its secondary significations—but true foundations, firm and strong, able to bear the superstructure and one that mere memory is not needed for.

We must guard against too obvious etymologies, and base our practice on strict scientific facts in language, of the latest and best results of philology. *Rehearse* seems to

be connected with *hear*, but is not, but with *harrow*, to run the mental *harrow* backwards and forwards over something ploughed or sown in the mind.

All the prefixes in use in English should be thoroughly conquered by the child as being in constant use. In these the same principle is largely available, as *dis* connected with *duo* and *two*, seen in dis-syllable; *ad* with *at* and *to*.—
W. JOLLY, Esq., H.M.I.

GEOGRAPHY (STANDARD V.).

The ordinary Geographical Reader will furnish most of the subject matter required to be given. In addition special oral lessons should be given on the following and similar connected subjects, which should be carefully prepared in Notes of Lessons by the teacher:—

(1) The general characteristics of the physical features of Europe.

(2) Differences between Europe and Africa.

(3) Resemblance of Europe to Asia.

(4) The geography of the Mediterranean, Baltic, and Black Seas.

(5) The mountain systems of Europe.

(6) The lines of watershed and drainage areas of Europe.

(7) The character of Europe as a whole.

(8) The volcanic system of Europe.

(9) The coastline of Europe.

(10) March of civilization on that continent from east to west.

(11) History of commercial progress in Europe.

(12) Commercial relations of Europe and the rest of the world.

(13) The Suez Canal.

(14) The chief capitals of Europe.

(15) Courses of the great rivers.

Guyot, in his "Earth and Man" shows that each of the continents has a separate character of its own; this depending on its physical features, and especially on its mountain axis, in its direction, height, and length. This special characteristic of the continents will apply to the work of the remaining standards (Asia, Africa, and America), and is seen in the differences between the old and new world, all arising from the trend of the mountain axis—in one case from north to south, in the other from east to west. In one case there is no barrier to migration of animals, plants, or man; in the other the mountain chains break up the continent into sharply divided zoological and botanical provinces. Moreover, in the latter case (old world) we have two opposite worlds—north and south—with constant struggles between them.

The special features of Europe are the extent of its coast-line compared with its size. Besides this is the variety of its surface, leading to constant interchange of life, to *development* of animal and vegetable forms, and to high states of civilization of man. Again, in Europe we must note, with the exception of Russia (which is a part of Asia and not of Europe), that the features of the continent, as a whole, are repeated in miniature in separate countries, as in Greece and Italy. These are only indications of the proper way in which to *begin* to teach the geography of Europe. Next mark out in detail the physical features of Europe in detail.

- | | | |
|----------------------------|---------------------|------------|
| (1) Mountain Chains. | (2) Rivers. | (3) Lakes. |
| (4) Islands. | (5) Peninsulas. | |
| (6) Drainage areas. | | |
| (a) The Arctic. | (b) Baltic. | |
| (c) North Sea. | (d) Atlantic Ocean. | |
| (e) Mediterranean Sea. | (f) Caspian. | |
| (7) Outline configuration. | (8) Climate. | |

We should next take up the countries separately, both physically and politically. (Political features depend on boundaries, that is, mainly upon physical features.)

NOTES OF A LESSON ON RIVERS OF EUROPE.

I. DRAINAGE AREAS.—The rivers of Europe are divided into five groups, according to outfall :

- (1) *Arctic* (Dwina).
- (2) *German Ocean* (Thames).
- (3) *Atlantic*, including English Channel and Irish Sea (rivers of east and west England and Ireland), north and west France, and west Spain.
- (4) *Baltic* (rivers of Sweden, part of Russia and Prussia).
- (5) *Mediterranean*, including Black Sea and Sea of Azov (Danube).

II. RIVERS TO THE NORTH AND SOUTH OF GREAT DIVIDING RANGE.

III. RIVERS SPRINGING FROM LAKES.—Neva.

IV. RIVERS SPRINGING FROM GLACIERS.—Rhine and Rhone, on Mont St. Gothard.

V. RIVERS WITH CAPITALS ON THEM.—Neva, Danube.

VI. One river taken typically, *e.g.* Rhine.

- (1) Source.
- (2) Course.
- (3) Flow through Lake Constance.
- (4) Falls of Schaffhausen.
- (5) Right and left tributaries.
- (6) Towns.
- (7) Its Delta (Holland).
- (8) The Basin.

NOTES OF LESSON ON MOUNT VESUVIUS.

- I. ITS SITUATION⁽¹⁾.—(1) Close to sea, as all volcanoes ⁽²⁾ are (except two); (2) isolated from Apennines (not general); (3) on Bay of Naples.
- II. DESCRIPTION.—Now a peak, about 4000 feet high; this is remains of an old cone inside a crater. Before A.D. 79, the crater was bushy, home of wild beasts, *rendezvous* of Roman rebels.
- III. ITS HISTORY.—Never heard of before 79, the outbreak which Pliny saw and described, and which destroyed Pompeii and Herculaneum,⁽³⁾ the first by fine ash, and the second by lava. Since then there have been intermittent outbreaks. When Etna ⁽³⁾ is quiet Vesuvius is disturbed, and *vice versâ*; again, when Vesuvius keeps still, earthquakes are prevalent, and *vice versâ*, from which facts we conclude two important laws.
- (1) Etna and Vesuvius are connected underground.
- (2) A volcano is an outlet of earthquake force.

METHOD.

- (1) Draw position of Vesuvius in sketch map.
- (2) Draw a section of a volcano.
- (3) Give positions of Herculaneum, Pompeii, and Etna.

LESSON ON THE MEDITERRANEAN.

- I. DEPTH.—The Mediterranean fills an immensely deep and comparatively precipitous chasm. A bar extends across the Gut of Gibraltar at about 900 feet in depth. Inside of this the water deepens so rapidly, that between Gibraltar and Ceuta, where the breadth of the channel does not exceed 12 miles, the depth is already 6000 feet; 90 miles east of Malta, we find a depth of 15,000; between Rhodes and Alexandria, 9900; and between the latter place and Candia, 10,200.
- II. AREA.—Its length is about 2400, and its breadth varies from

400 or 500 to 79 miles; the area in square miles is upwards of 750,000; about 1,000,000 square miles of country are drained by it.

III. CURRENTS AND EVAPORATION.—At one time the Mediterranean was considered tideless; now we find that in the port of Venice the tide has a range of 5 feet at new and full moon; at Naples the range is 12 inches. Various currents keep the waters in circulation. In ancient times the celebrated whirlpool of Charybdis was the terror of the neighbouring mariners. It has been held, on the authority of Halley, that the evaporation of this sea is materially greater than the extra supply from its rivers, and that, therefore, it must be increasing in saltiness by the continual indraught of sea-water from the Atlantic, unless relieved (as has also been supposed) by an under current of salter and heavier water flowing outwards. To prove this, we will suppose the total area of Mediterranean, Euxine, and Azov Seas amounts to 1,150,000 square miles, and that these seas are traversed medially by the isotherm of 63°. Now this is the mean temperature of July at Tottenham, at which, for that month the observations of Howard assign an average evaporation of 4.111 inches, which, continued over the year, would give 49.33 inches. The observed annual evaporation at Marseilles exceeds 85 Paris inches. So that we shall be quite within limits in taking 50 inches per annum as the average evaporation over the whole surface in question. As regards the quantity restored by rain, Palermo, as an insular station, well-situated about the middle breadth of the Mediterranean, gives 22.3 inches, for the fall of rain, which may be taken as the average supply from that source, leaving 27.7 inches, or, in round numbers, 28 inches for the excess of evaporation. This, computed as extending over the whole area, gives 508 cubic miles of fresh water annually abstracted.

IV. INFLOW.—The Nile delivers into the sea 101,000 cubic feet of water per second, on the average of the whole year, which gives an annual contribution of fresh water from this river alone = 21.653 cubic miles. So that, even on the extravagant supposition that each of the other principal rivers (the Danube, Dnieper, Don, Rhone, Dneister, Ebro, and Po) contribute as much as the Nile, we should still have only 173 cubic miles of river supply, leaving 335 to be furnished from the Atlantic. In point of fact, the current which sets in at the straits—estimated by Admiral Smyth as 4 miles in breadth, with an average velocity of $2\frac{1}{2}$ miles per hour—would carry in, supposing it to extend 30 fathoms only in depth, 2987 cubic miles per annum, of which it is therefore past a doubt that at least 2000 must flow out again in the form of an underground current—no lateral current being observed to exist.

In several places in the Mediterranean, springs of fresh

water, nay, even subterranean rivers, well up to the surface from considerable depths. Many such are enumerated by Admiral Smyth; but the most remarkable is Anàvolo, in the Sinus Argolicus, where a body of fresh water 50 feet in diameter rises with such force at a quarter of a mile from the shore, as to produce a visible convexity of surface, and to disturb the sea for several hundred feet round.

- V. WINDS.—The winds of this sea are peculiar in their manner of blowing; at the same time several vessels sail over its surface each in a different direction, carried by different winds. The sirocco, from Africa, blowing over its surface, is accompanied by a gloomy sky, and has a depressing effect on the animal system. As many as sixteen waterspouts have been visible at one time.
- VI. ISLANDS.—The most important islands are the Balearic islands, Sicily, Sardinia, Corsica, Ionian islands, Candia, Cyprus, and Rhodes.

LESSON ON GIBRALTAR.

Gibraltar levies no toll; it sets no hindrance to its traffic; hardly profits by it, for it buys but little, and has nothing to sell. It consists of rows of neat houses, sweet tropical gardens, smooth, solid, well-watered streets and paths. What cleanliness there is; how much comfort and luxury; what hotels, what libraries, what amount of well-being one finds in the narrow ledge of rock which the exigencies of military defence have been able to spare to its motley population; what immense relief it is to come to this oasis of English thrift out of the wilderness of Spanish dinginess and sloth! There is only one drawback to it all—Gibraltar lives by smuggling. The people themselves have no hand in the unlawful business; they are honest traders and keep open shop.

Smuggling goes on from Gibraltar by land and sea, and the chief articles in which it is carried on are tobacco (which in Spain is a Government monopoly), tea, coffee, sugar, and other colonial goods, upon which heavy duties are demanded at the Spanish Custom-houses. The smuggling of cotton tissues and other English manufactured goods has of late greatly decreased, and almost ceased, because "protection has given so great a development to Catalan industry that home competition has driven foreign produce from the Spanish market." Tobacco is the chief offender.

The so-called "lines" which separate the British from the Spanish territory across the narrow neck or isthmus which makes the Rock a peninsula, are only a few hundred yards distant from the gates of Gibraltar. The Spaniards have on their own side so barred the way across the sandy flat, and allowed so narrow a way through, that persons walking, riding, or driving past their lines must as they go brush past their Custom-house officials and *Carabineros*, or Custom-

house guards. Here, nevertheless, an endless number of petty smugglers—chiefly women and children—manage incessantly to go through with the forbidden merchandise secreted about their person. As far as any extensive trade is concerned, Gibraltar, unapproachable as it is by carriage road from any part of Spain, may be looked upon as an island, and its main intercourse must be by sea.

In the port of Gibraltar, as at the gates of the town, in obedience to indispensable military rule, ingress and egress are forbidden between sunset and sunrise, and no vessels are allowed to leave the harbour at night without special permission. But vessels which have left harbour before sunset cannot easily be prevented from tarrying in the bay at their own pleasure, and taking in such contraband merchandise as small boats may manage to convey to them by stealth under favour of darkness. Owing to want of space in the cramped-up wharves and docks of the town, large stores of coal are kept in hulks anchored outside the port. These coal-depôts take in large loads of tobacco bales, and these are easily transferred from the hulks to the smuggling vessels while these are waiting outside the harbour either for daylight or a fair wind.

It is certain that no Englishman, and perhaps, also, no British subject, at Gibraltar has a direct hand in the smuggling trade of which Spain complains. Gibraltar is undoubtedly the chief depôt of this illicit trade, the quantity finding its way from the Rock into Spain averaging between 80,000 and 100,000 cwt. yearly. The persons engaged in and living by this trade in Gibraltar, as manufacturers or dealers, number between 1600 and 2000, constituting with their families a population of 4000 to 6000.

LESSON ON THE RHINELAND.

Wiesbaden is a celebrated watering-place, and until within a few years was noted for its open and intense gambling. The city contains a resident population of 40,000, but its visitors annually much exceed that number. They come from all parts of the world, and the most striking feature of the city are its fine hotels and comfortable boarding-houses.

There is an old part of the city that is characterized by narrow, crooked streets, and quaint old houses, quite in the style of all European cities and towns that count their age by centuries. Around this unattractive nucleus has gathered the new city with its broad avenues, its beautiful parks and gardens, its fine private residences, and splendid hotels. Along some of the streets the walks are shaded with trees so trimmed and trained as to meet overhead and form a complete archway extending many hundreds of yards.

The hot springs of Wiesbaden are very celebrated for the curative qualities of their waters, and a great many invalids can be seen here walking about on crutches, wheeling back and forth in rolling chairs

or sitting on the porticoes of the hotels and boarding-houses. The water itself as it comes from the springs is too hot to be taken into the mouth without cooling, its temperature being 156° Fahrenheit. It has a thick, oily taste, not very agreeable as a beverage. The spring attracts invalids; but the great crowds about the hotels and in the gardens and parks of Wiesbaden are not sick people, but pleasure seekers from all parts of the world. They come for recreation, for the society, and for the music.

As showing some of the phases of social life in this part of Germany, it may be stated that shops and stores are kept open on Sundays as well as on week days.

The railroad from Wiesbaden to Heidelberg runs along the valley of the Rhine, with mountains in full view from the car windows on both sides of the train. Very many old castles are seen crowning the distant cliffs, and the old farms and villages are a source of constant interest. Except here and there the residence of some titled or wealthy gentleman, all the people of this thickly settled valley seem to live in villages—old villages with scarcely a new or modern-built house in them. The whole country is divided into small patches of land like gardens, separated by furrows, sometimes by rows of trees, but never by fences; and the working people, men, women, and children, go out from the villages to work their little farms, sometimes a long distance away. Of the labourers in the fields, at least two-thirds are women, and the tools they use are very primitive and old-fashioned. A single ox or cow is frequently used for ploughing or harrowing, and loaded carts are often pushed by hand or drawn by dogs. The grain is nearly all cut with sickles. The land is very rich and finely cultivated for rye, barley, wheat, etc.

Frankfort-on-the-Main has beautiful streets, with houses surrounded by elegant gardens. Here is a magnificent park; the house where Goëthe was born, and the one where Luther lived while in the city; and a fine monument of Gutenberg, the father of printing. The *Judengasse* is the Jews' Quarter, with its curious old wooden houses, their dingy basements occupied by shops and exchange offices, and their high upper stories, overhanging the street, unpainted, quaint and solid; here is the very house where the world-renowned banker, Rothschild, was born, and the business offices of the present Rothschild family, upon whom empires have been dependent.

Near Heidelberg is Geisberg, a mountain of considerable height, overlooking the city and the whole adjacent country. The summit is reached by a pleasant footpath, and if one ascends the tower a magnificent view will be opened up. Directly below lies the city, with its strange-looking old houses, its University, its Castle, its eventful history. Out from between the mountains on the right comes the classic Neckar, and flowing under the bridges, old and new, washes the feet of the city for its whole length, some two miles, and then winds, like a silver thread, through the valley to the Rhine. Beyond the Rhine, which is visible in the distance towards the west, rise against the western sky the ridges of the Vosges; looking east

we see the deep, narrow valleys and the wood-covered mountains of the Odenwald, while the view towards the south takes in the Swabian Mountains and the Black Forest, so noted for its mysteries and its legends. These mountains form the framework of the Rhine and the Neckar valleys, and the human eye seldom rests on a more lovely picture than that of these valleys, holding one almost speechless and spellbound on the top of the Geisberg, until the approaching darkness conceals it from view. It is not so much the splendid mountain scenery, the winding river, or the beautiful villages and country seats that attract one, as the peculiar mode of cultivation that cuts the whole of the rich country into thousands of little fields or gardens, differing in size and shape, coloured by the growing crops, yellow, green, brown, red, with many shades, and forming, as a whole, a magnificent rural mosaic, containing some hundreds of square miles.

The following "Teaching Notes" may serve as a specimen of the kind of preparation required for the above:—

CONSTANTINOPLE.

- I. SITUATION.—On the European side of the Strait of Constantinople, protected from approach by forts, batteries, and castles; on a gently sloping promontory, separated from Asia by a quarter of an hour's rowing. Its port is the Golden Horn, an arm of the Bosphorus, with suburbs of Galata and Pera on it. Built on hills.
- II. THE BOSPHORUS.—Seventeen miles long, 600 yards broad in its narrowest part, three times as broad opposite Constantinople. Promontories on each side jut out into it, with reaches between. Navigation difficult. Fortified on both sides.

The best sets of Readers in Standards V. and VI. are excellent quarries from which the teacher may borrow the facts and information necessary to build up similar teaching notes.

NOTES OF LESSON ON GEOGRAPHY OF CYPRUS.

Skeleton.

- I. SITUATION, ETC.—Off coast of Syria ; 145 miles long, 55 broad, 4500 square miles (one-third size of Yorkshire) ; population, 200,000.
- II. TOWNS.—Chief seaport, Larnaka, seat of European consuls, and commercial depôt, with safe anchorage.
Nikosia, capital ; taken by storm by Turks in 1570 ; mulberry and palm trees, intermingled with minarets of mosques.
- III. CHIEF PRODUCTS.—Wheat, barley, cotton, silk, madder, olive oil, wine, wool, tobacco, timber, fruit, salt (sent to Marseilles, Leghorn, and Syria).
- IV. IMPORTS, ETC.—British goods. Many Grecian, Roman, and Christian relics are found in Cyprus.

General Description.

Cyprus is divided into six districts, but according to its physical geography the island can be described by four. The principal port is Larnaca, in the central district (south). This is the landing-place of all new-comers. In the centre of this district is the capital, Lefkosia. In the south-east, is the only real harbour, Famagosta. These principal towns are situated in the great desert-like plain of Messaria, which should be the chief cereal-producing portion of the island. It is difficult to describe the apparent sterility of this parched wilderness, and equally impossible for a new-comer to understand the actual value of a thistle-covered surface without a brook to moisten a line throughout the plain of dust, with river beds devoid of one drop of water ; nevertheless, this apparent desert has been, and will be, the wealth-producing area of the country. Although the earth is parched by drought, there is at all times a supply of water within a few feet of the surface, which is supposed to be inexhaustible ; thus the means of artificial irrigation should render Cyprus almost independent of precarious seasons. Three centuries

of Turkish desolation and oppression have crushed the energies of the population, and left them poor and miserable; they have no money for the erection of water-wheels.

There is an absolute necessity for irrigation works, and the inhabitants are perfectly able and fully prepared to carry out, upon their native plans, the various systems for obtaining water. A water-wheel and two oxen will raise sufficient water to irrigate 40 acres per annum. The Cypriotes are exceedingly clever in discovering springs and making them available for irrigation by means of a series of many hundred wells connected by subterranean tunnels, which conduct the water from great distances to the desired level. All that is required is monetary assistance. It is generally believed that the destruction of forests has affected the climate and reduced the rainfall of Cyprus. This may be the case to a certain extent, but the close proximity of the great range of mountains in Asia Minor, within 70 miles of the northern coast, must, by superior attraction and the low temperature of the higher altitudes, seriously interfere with the rainfall of this island. The ancient prosperity of Cyprus was the result of artificial irrigation, and the seasons were exceedingly precarious then as now.

The first necessity is water; without a regular supply the general fertility of the soil is negatived. The revenue is dependent upon agricultural productions, which are equally dependent upon irrigation.

The remaining districts are the eastern, the narrow strip upon the north coast, and the western province. The former is most picturesque, comprising mountains and hills clothed with evergreen shrubs and trees, including pines, cypress, olives, carobs, myrtles, oleanders, mastic, etc., which grow to the water's edge. The valleys are limited in extent, and the agricultural value of the district is inferior. The narrow district of Kyrenia, upon the north coast, is peculiarly beautiful, forming a striking contrast to the dusky brown surface of the parched Messaria, from which it is abruptly separated by a wall-like mountain chasm of Jurassic limestone only three miles in thickness. When standing upon the summit of this precipitous ridge, upwards of 3000 feet above the sea level, the view to the south is the melancholy Messaria, while to the north all is beautiful; the slopes and level ground extending to the sea are rich in verdure and covered with shady carob trees; we look down upon the town and important fort of Kyrenia, with its ancient and neglected harbour.

The western district is rich in mountains, plains, and elevated plateaus.

NOTES OF A LESSON ON LATITUDE.

[Apparatus required: Globe, blackboard, map of the world and map of Europe.]

Subject Matter.

- I. INTRODUCTION.—Draw a thick horizontal line across the middle of the blackboard. Let the upper half of the board be called N., the lower S. Draw lighter lines parallel to these, above and below the middle line, dividing the space equally into ninths; name these from the middle line 10, 20, 30, etc., up to 90 N. and ditto S. This gives us zones of *equal width*; at *equal distances* from the middle line. Do the same on a circle drawn on the board. This gives us meaning of *equator*, and parallels of *latitude*; let the figures marking these be at the side.⁽¹⁾
- II. MAP PRACTICE.—On the map of the world, point out parallels of latitude: marked in *degrees* at the circumference. Note that the whole circle of a hemisphere is divided into 4 quadrants: $360^{\circ} =$ four of 90° each.
- Next take map of Europe; point out the same parallels, now drawn closer together, say at intervals of 5° only.⁽²⁾
- III. USE OF LATITUDE.—If a man knows his latitude, he knows the *circle* of the globe on which he is; but not the *point* of the circle.
- These parallels roughly mark the climate, and vegetable and animal zones; for these depend on distance from equator or pole.⁽³⁾

METHOD.

(1) Let children do the same on slates.

(2) Mark the great zones of the earth's surface (Tropical, Temperate, and Frigid, N. and S.); subdivide these into subtropical, N.

and S. (or warm and cold), temperate; arctic and subarctic; and same for the S. hemisphere.

- (³) *Inquire in what countries a man may be who is in the 10th, 20th, etc., parallel of latitude. Do the same on map of Europe. Inquire also what countries will have nearly the same climates—hot, cold, or temperate. Note that a degree of latitude is broadly of the same length everywhere on the earth's surface; and what that length is, $\frac{1}{360}$ of 25,000 miles = nearly 70 miles.*

NOTES OF A LESSON ON LONGITUDE.

[Apparatus, as before.]

Subject Matter.

- I. INTRODUCTION.—On the plan of the previous lesson, on blackboard draw a middle perpendicular line; make this the starting-place from which to count E. and W. Half of board to right is E., other half, W. Count these as 180° in tens (18) to E. and ditto W. = 360° in all. This breaks up board into squares, marked for latitude at sides, and for longitude at top, bottom, or middle horizontal line. Position of any point on board is thus known, as square No. 3, 7, where 3 marks distance N. (or S.) of “equator,” and 7 distance E. (or W.) of middle vertical line (meridian).⁽¹⁾
- II. MAP PRACTICE.—On map of world show these vertical lines. But here the lines converge to the poles, because the world is round, not flat. Hence we get E. and W. longitude from the starting-place. This starting-place is circle drawn through London, Paris, etc., and the poles; such a line is a “meridian,” because the sun shines on it at mid-day at that place. These meridians are not now parallels, for they converge to the poles; and the length of a degree on them is not fixed, but varies

from $\frac{1}{360}$ of 25,000 miles at equator, to 0° at the poles.⁽²⁾

- III. USE OF LONGITUDE.—This determines position of place E. or W. of meridian line. If known, the man knows on what *circle* he is, and the latitude, if known, tells where on it.⁽³⁾

METHOD.

- (¹) *Point out that maps of cities are thus constructed for easy reference.*
 (²) *Show why the globe is divided into hemispheres along the lines generally taken.*
 (³) *Ask for the countries traversed by such and such meridians.*

NOTES OF A LESSON ON DAY AND NIGHT.

Subject Matter.

- I. WHAT THEY ARE.—Time when sun is above and below horizon. Sun rises in E., day begins; sun passes (nearly) overhead, sets in the west; sinks beneath horizon, night commences. (This is taking no notice of twilight.)
- II. REAL CAUSE.—This motion of sun is *apparent* only. Really sun remains fixed (so far as this is concerned); and earth rotates on its axis. Draw diagrams to represent light and dark halves of earth turned towards and from the sun, in day and night. Earth is 24 hours rotating once, so day is roughly 12 and night 12 hours long. This is when earth's axis is not turned towards or from sun.⁽¹⁾
- III. VARYING LENGTHS OF DAYS AND NIGHTS.—In diagram, incline the earth's axis; draw parallels of latitude, N. and S. of equator; show that in hemisphere turned towards sun, there is more

than one-half, and *vice versâ*, of circle in daylight ; so day longer than 12 hours.

This is one factor in summer (and conversely in winter.⁽²⁾)

METHOD.

- (¹) *Let boy stand for sun fixed, and another for earth rotating. Show, that same lighting effect follows if first revolves round second or second on his own axis.*
- (²) *Inquire as to times of sun's rising and setting at different seasons of the year.*

THE SEASONS.—This subject is so complicated that it must be left to the elucidation of the Head Teacher, by means of diagrams, etc.

CHAPTER XX.

SCHEDULE I. (STANDARD VI.)

READING.—“*To read a passage from one of Shakespeare’s historical plays, or from some other standard author, or from a History of England.*” (New Code, 1883.)

[Three sets of readers required, viz.: (1) Historical Reader; (2) Geographical or Scientific Reader; (3) Book of Extracts, or Historical Plays of Shakespeare, or Book of Milton, or Book of Travel, or Biographies.]

“*In Standards VI. and VII. a single play of Shakespeare, or a single book of one of Milton’s longer poems, or a selection of extracts from either poet equal in length to the foregoing may be accepted. As a rule, ordinary text-books or manuals should not be accepted as readers.*” (Instructions to Inspectors.)

WRITING.—“*A short theme or letter on an easy subject, spelling, handwriting, and composition to be considered; an exercise in dictation may, at the discretion of the Inspector, be substituted for composition. Copy-books to be shown.*” (New Code, 1883.)

“*The writing exercise prescribed for Standard VI. is the earliest exercise in composition required in the Code as part of the writing exercise; and no child ought to pass who does not show the power to put together in grammatical language, correctly expressed, and, if required, in the form of a letter, a few simple observations*

on some easy subject of common and familiar experience."
(Instructions to Inspectors.)

ARITHMETIC.—"*Fractions, vulgar and decimal; proportion, simple and compound; and simple interest.*"
(New Code, 1883.)

READING.

The strictly "authentic historical plays" of Shakespeare are "Richard II.," "Richard III.," "Henry IV.," "Henry V.," "Henry VI.," "Henry VIII.," and "King John." (Besides these are "legendary historical" plays, viz. "Julius Cæsar," "Anthony and Cleopatra," "Macbeth," "Hamlet," "King Lear," "Coriolanus," "Titus Andronicus," and "Cymbeline.")

In selecting one of these the following considerations should be borne in mind:—

- (1) *Expurgated* editions alone should be used.
- (2) *English* historical plays should be preferred.
- (3) Those with the *least intricate plot* should be selected.
- (4) Those of the *most dramatic interest* should be chosen.
- (5) Those consisting of more than one part ("Henry IV." and "Henry VI.") should be rejected.
- (6) Do not choose those that deal too freely with bloodshed ("Macbeth").
- (7) In reading these, illustrations should be given from
 - (a) The *history* of the time of the play.
 - (b) The *dress, manners, and customs* of the period.
 - (c) The *local surroundings*.
 - (d) Similar words and phrases found elsewhere in Shakespeare.
 - (e) The *history of the stage* in Shakespeare's time.
 - (f) The *Life of Shakespeare*.
 - (g) The *history of the reign of Elizabeth*.

(8) A good annotated text should be in the hands of the teacher, and this should be interleaved for his own manuscript notes. "Lamb's Tales from Shakespeare" should also be read for the special play.

(9) The difficult passages should be paraphrased.

(10) The *moral* of the play should be pointed out.

(11) The development of *character* and situation should be elucidated as the study proceeds.

(12) The choicest descriptions, speeches, and soliloquies should be learned by the pupils and teachers.

(13) The class should "take parts" in reading.

(14) Words should be explained by means of their prefixes, suffixes, and *root meanings*.

(15) Changes in the meanings of words should be pointed out.

(16) The figures of speech should be remarked on.

"The historical plays of Shakespeare are a kind of National Epic. Marlborough knew no English history but what he had learned from them. There are really few as memorable histories. The great salient points are admirably seized; all rounds itself off into rhythmic coherence. There are right beautiful things in them—they indeed together form one beautiful throng."—T. CARLYLE.

In order to give the teacher an insight into the character and spirit of Shakespeare and Milton, two short essays are here given, which will be useful to him in other directions.

THE ENGLISH DRAMA.

The earliest English dramas were written and played by ecclesiastics, often in religious houses, the subjects being sacred; this being the form in which religious truth was attempted to be taught, as may be seen in the titles of the Miracle Plays; such as "The Creation," "The Fall of Man," "Cain and Abel," "The Crucifixion," "The Deluge," etc.

The first are known as Miracle Plays, dealing with Scripture

events, or incidents in the lives of the saints, as the "Chester Plays." The stage was divided into three divisions, representing heaven, earth, and hell, and the dresses were taken from the vestry of the church, where the plays were acted at festivals—the Devil being the comic element.

The next were Moralities, in which vices and virtues were personified. These were *moral* rather than *religious* as the preceding were, the actors being "Repentance," "Gluttony," "Pride," etc., with the Devil for the comic character again. The oldest extant is "The Castle of Perseverance," written about 1450. Subsequent to these came "The Interludes," generally farcical.

The first English comedy was written by Nicholas Udall, viz. "Ralph Roister Doister," written about 1557. The next was "Gammer Gurton's Needle," written by J. Still, afterwards Bishop of Bath and Wells, a ridiculous farce on the loss and finding of this implement of the housewife in the inexpressibles of her man Hodge.

The first extant English tragedy is known as, "Gorboduc, or Ferrex and Porrex," probably written by Norton and Sackville, about 1567, and in blank verse, giving us an ancient British historical sketch, written for Queen Elizabeth.

There were yet no regular theatres or recognized actors, the latter being amateurs, and the former town halls, inn yards, dining-halls, etc. Later, actors appeared under the patronage of men of the court, and went about as strolling players.

The latter half of the reign of Elizabeth was the most brilliant period of English literature.

"There never was, anywhere, anything like the 60 or 70 years that elapsed from the middle of Elizabeth's reign to the Restoration, for in that short period we shall find the names of almost all the very great men that this nation has ever produced; the names of Shakespeare, Bacon, Spenser, Sydney, Raleigh, Hooker, Milton, and others."

The causes of this brilliance were the spirit of adventure of the time, as evidenced in the resistance to the Spanish Armada; the discovery of new lands; the opening up of classical learning; the increasing wealth of the nation; and the freedom of thought encouraged by the Reformation.

In the time of Henry VIII. the leaders of the people first began to recognize in the drama a means not only of popular education, but of political instruction. Henry soon saw occasion to repent the encouragement he had given to the drama, as in a short time it became immersed in the strifes of Church or State. A statute was passed in 1543, prohibiting all "ballads, plays, rhymes, songs, and other phantasies," as had not for their object the "rebuking and reproaching of vices, and the setting forth of virtue." This statute falling into neglect, a severer measure was passed by Edward VI. for the entire suppression of every form of stage play. But by this time the drama had taken a firm hold on the public mind, and a compromise was found to be necessary. This was effected by licences granted

to the private companies of various noblemen. Besides these, the choristers of certain churches were allowed to perform their "miracle" or "morality," as, for instance, the "children" of the Chapel Royal, and those of St. Paul's, Westminster, and Windsor. But during the reign of Mary even these were suppressed. Under Elizabeth they were very cautiously revived. The Earl of Leicester was the first to obtain a patent for maintaining a private company of actors. In 1575 the players converted a disused monastery in Blackfriars into the first stationary English theatre. For a time the Greek and Latin classics, then the Italian and Spanish literatures, were ransacked to furnish stories capable of dramatic adaptation.

LIFE AND TIMES OF SHAKESPEARE.

William Shakespeare was born at Stratford-on-Avon, 1564; his family had lived in the neighbourhood for probably two centuries. His father, John, farmed his own land, was a glover, farmer, and dealer in wool, who in 1571 became chief alderman in Stratford. As he took the Corporation Oath,* it is evident that he was a Protestant. He bore arms (his crest being an eagle shaking a spear), and therefore must at one time of his life, at least, have taken rank as a gentleman, though it is probable that he was straitened in his circumstances all his life. He was twice high bailiff, i.e. chief magistrate. (He was an alderman in consequence of having been bailiff.) He married Mary Arden, or Ardern, who had a moderate dowry, and was of respectable family. In spite of his position in society, there is good reason to believe he could not write his name, as such ignorance was not uncommon in those days. He had ten children. William was the third child, and the eldest of his sons. His eldest daughter married W. Hart, a hatter, whose descendants appear to be the sole survivors of the Shakespeare family. Three of his sons besides William attained to maturity, Gilbert, Richard, and Edmund; the last was an actor. It is most likely that William was sent to the Grammar School at Stratford, the masters of which during his schooldays were first T. Hunt, and afterwards T. Jenkins. There can be no doubt that he was fairly grounded in Latin and Greek, though Ben Jonson says "he had little Latin and less Greek." The main proof of his classical knowledge is that he almost always uses words of classical origin in such a way as to show that their derivation was present to his mind. As regards the Latin and Greek authors, he knew them mainly through the help of translations, which were more abundant in that day than they are in ours. It is most probable that when he left school he for some time assisted his

* Until the time of William IV. members of corporations were obliged to take an oath that they were members of the Church of England.

father in his business. The common story that he was articulated to a lawyer is quite without foundation. In 1582, when under 19, he married A. Hathaway, aged 26, the daughter of a farmer whose family was intimate with his own. The match, like all such early ones, was a very imprudent one, though it is known that the friends on each side consented to it, as there are witnesses in the register both of the Shakespeares and Hathaways, and there is no good reason to doubt that they were sincerely attached to each other, and that they were happy after Shakespeare had overcome his pecuniary difficulties. In 1585, perhaps in a great degree under the pressure of pecuniary difficulties, he left his wife and children at Stratford, and came to London. The story of his being obliged to quit Stratford, having been convicted of deer stealing in Charlote, the estate of Sir T. Lucy, is false; though it may possibly be an exaggeration of a mere frolic which provoked Sir Thomas. More probably the somewhat straitened circumstances of his father, and the bent of his own genius, induced him to try another line of life in a larger sphere. He seems to have taken up the profession of an actor at once, and to have made rapid progress. The statement that he held horses at the door of the theatre is a figment, and probably arose from the fact that boys so employed were called "Shakespeare's Boys," owing to his having organized the business of the theatre with his usual good sense, and constituted the boys regular servants of the theatre. It is most likely that Shakespeare's taste for the theatre had been called out at Stratford, where he must have seen performances of strolling players, who were in the habit of playing in barns, town halls, large rooms, etc. We know actually nothing of his life in London until six years after his arrival, when there appeared a pamphlet entitled "A Groat's Worth of Wit, bought by a Million's Worth of Repentance." This was written by Greene, a dramatist of loose character of the day, just before his death, and was published by his friend Chettle. There is an allusion in it, "to an upstart crow beautified by our feathers, that with a tiger's heart wrapt in a player's hide supposes he is as well able to bombast out blank verse as the best of you, and being an absolute 'Joannes Factotum' (i.e. 'Jack of all Trades') is in his own conceit the only shake-scene* in the country." The designation "Factotum" refers to that practical activity and good sense which afterwards showed itself so favourably in the management of his affairs. It is evident that he was one of those ready to do anything in the line of his duty, however humble. Greene's allusion to him was evidently the result of sheer jealousy. It would seem that soon after the publication of the pamphlet, Shakespeare became acquainted with Chettle, who then brought out a pamphlet of his own, in which he plainly refers to Shakespeare, speaking of his "civil demeanour, uprightness of dealing, and facetious grace in

* Shake-scene is here evidently a play upon the name of Shakespeare.

writing;" thereby expressing his regret at the former allusion to Shakespeare. It is evident that by the time he was twenty-five, Shakespeare had attained to sufficient eminence to excite envy, and that he had obtained a fair reputation in regard to money matters. Strolling players under the Tudor sovereigns had been a great nuisance to society. They were for the most part men of abandoned lives, and their performances were rarely such as to instruct or improve, and they often made their profession a mere pretext for unlawful conduct. [They interfered also with the interests of those more respectable bodies of actors who acted in established theatres, and each of whom took the name of some royal or noble patron. One company called themselves the Queen's Servants, another the Lord Chamberlain's, etc.] What they chiefly acted were "Mysteries" and "Moralties;" the former were founded on incidents taken from the sacred history (preposterously caricatured), and the latter were allegories. They were written without literary skill, and were generally acted in a buffoon-like style. In 1572 an act was passed to put down strolling players, and to secure the interest of authorized bodies of players, who performed under the patronage of the queen, lord chamberlain, or some powerful nobleman. These bodies occasionally made surveys through provincial towns and were everywhere regarded as under the protection of their patrons. The old bodies of strolling players fell more and more into the background, though for a long time afterwards they occasionally distinguished themselves by their quarrels with the police. There were about this time seven or eight theatres in London. The theatre of that day was, however, a very simple structure, resembling, in fact, a square inn-yard, with one or two galleries round it of the plainest construction. Some of them had roofs, and were called "winter theatres;" others were open, and were only used in summer, with one or two galleries round three sides. There was no scenery, but it was usual for a sign-board having the name of the scene painted upon it to be placed behind the actors. No women performed in the theatres till after the Restoration; female parts were taken by boys. The use of scenery seems to have come in by degrees; the dresses were, however, an important feature, and Shakespeare was for many years the keeper of the wardrobe of his own theatre; but there was probably no very great attention to propriety in the style of dress. In 1592 Shakespeare is named in a list of 16 proprietors of Blackfriars Theatre, erected 1575. It stood where the *Times* printing-office now stands. It was a winter theatre, with a roof, and the company were called the Queen's servants, or the Lord Chamberlain's servants.

It is said that it was Shakespeare's habit to visit Stratford yearly. He appears to have given up actually residing in London about the year 1605. A probable tradition, related by Ward, who was clergyman of Stratford about 70 years after Shakespeare's death, states that he used to write about two plays a year, and that he used to go to London to bring them out. He thus no doubt considerably increased

his income. From a probable estimate which has been made of his theatrical property and of what he had at Stratford, it is inferred that his income amounted to between £400 and £500 a year, which must have been equal at that time to about five times the same amount at present. He appears to have lived as an opulent country gentleman. In 1608 his mother died, and in 1614 Shakespeare came to London to petition against the enclosing of some land, on behalf of the Corporation and poor of Stratford—most likely his last visit to London. In March, 1616, he made his will; and one month after, it is said on St. George's Day (his birthday), he died quite suddenly, after dining with Ben Jonson and Drayton, who had come from London to visit him. In his will he leaves the bulk of his property to his daughters, but one item is, "I give unto my wife my second best bed, with the furniture." It has been inferred from this that he was not on good terms with his wife, and that the bequest was meant to insult her. This is, however, extremely improbable; one-third of his property belonged to his wife by law, and it was not necessary that it should be mentioned in the will. Besides this she had her own jointure, so that she was amply provided for, and nothing is more probable than that the second best bed was left to her by her own request. [It should be further noticed that in former times the bequest of a bed was a token of regard. We find in the Black Prince's will three beds are thus left to his most intimate friends.] Shakespeare lies buried in Stratford Church; a flat stone covers his body, with a quaint inscription:—

"Dear friend for Jesu's sake forbear
To dig the dust inclosed here;
Blest be the man who keeps these stones,
And cursed be he who moves my bones."

A fine bust of him is in a niche in the wall above the tomb.

Shakespeare appears to have been a very handsome man, but somewhat slender; all the notices we have of his manners would lead us to suppose that he was frank, courteous, and civil. Ben Jonson says that "he was of free and open nature." Almost every fact on record confirms us in believing that he was in the highest sense a good man. On his arrival in London, his rise must have been wonderfully rapid, and his progress shows remarkable thrift and carefulness in little things as well as great. He seems early to have formed a deliberate purpose to return to his native town, and during his whole life we find him zealously discharging the duties of a brother, father, friend, and fellow-townsmen. No manuscript of Shakespeare exists except his signature.

LIFE AND TIMES OF MILTON.

It is only by *inference* and *sympathy* that we can really understand the story of any man's life. The biography of a man has a soul as well as a body; and we must know what was the *spirit*, the *hope*,

the *intention*, which animated him, and which connect and give a *meaning*, a *purpose*, and an *end* to the course of events.

What was Milton's object and purpose in life? Does the character of Milton deserve our respect and honour on the one hand, or must we return a verdict of condemnation and disapproval on the other? We want to know the sort of man he was; the sort of work he did; the means he used; whether he played well his part, and came to the end a conqueror.

Milton inherited very unusual gifts; he was from the very first trained and encouraged by his parents to cultivate his great talents. He deliberately and religiously determined so to spend his life, and cultivate his powers, that he might become a worthy organ of poetical inspiration.

To carry out his purpose Milton bent all his energies, "spent sleepless nights and lived laborious days." But when Milton reached the age of thirty, "a change came o'er the spirit of his dream"—a change brought about, not by his own wish or will, not by any fickleness or failure, but by the circumstances of the times. He dared not turn a deaf ear to the call of duty, and he became the most illustrious pamphleteer of the age. But "when the hurly-burly was done," then Milton was able freely to take up again the broken thread of his life's purpose, and so his life was rounded again into a perfect sphere, and he brought to an end at last that which he *intended* at first.

We cannot separate Milton *the poet* from Milton *the politician* by any hard-and-fast line. The whole nature and genius of the man is present in all he does. Milton was never a mere politician. He was rather a state *prophet* or *seer*; he had a poetic ideal, a high-souled vision of the Christian Commonwealth that should be; and this coloured all he wrote, while it also served as a standard towards which he strove to raise men's thoughts and ambition.

The career of Milton was divided into three epochs, the first of which will carry us from his birth in the year 1608 to his return from the Continent at the age of 31; the second will embrace the Civil War and the Commonwealth; while the third period will reach from the Restoration to the death of Milton, in the 66th year of his age.

During the *first* Milton was at school and on his travels; the *second* period was spent by him as the literary advocate and champion of *his party*, and, in a sense, of *the nation*. The picture of Milton during the third period is that of "the blind man eloquent," proscribed, concealed for a time from the anger of the restored Stuarts, and banished by persecution, so that in his forced leisure he might "speak of things unattempted yet in prose or rhyme."

Last scene of all is that of Milton taken aside from the world of politics by the Restoration and almost shut out by blindness from the world of books and the outside world of nature; *ruined in fortune, unhappy at home*, the greatest surviving leader of a political party, outliving political friends and losing his wealth; and tried by fire.

Queen Elizabeth had been dead five years, when Milton was born in 1608. The May-day burst of literary and political glory had died away. Shakespeare had written his plays; the Spanish Armada had been scattered. England had for a time drawn herself once more within the bounds of the four seas, and was enjoying a rest after the stirring period of national life, which had just passed away. It was in those "piping times of peace" that John Milton was born.

The father was a man of strong will and stern integrity; he was also a devoted lover of intellectual culture. A proof of the sternness and vigour of the father's character is to be found in the fact that he preferred to be disinherited by his own father (who had been a Roman Catholic) rather than abandon the reformed doctrines which he had embraced.

Both for good and for evil there was a great deal of iron in the blood of the Milton family. Milton's father was a man of culture, a lover of books, an enthusiast in the practice of music, and a stern, unremitting overseer of his son's education. The elder Milton was more than forty years old when he married; from the very first he designed that his son should lead the life of a severe student. From these circumstances it resulted that, even from childhood, the intellectual training of young Milton was carried to an excess. His mind was cultivated at the expense of his body.

"My father destined me while yet a child to the study of polite literature, which I embraced with such avidity that from the twelfth year of my age I hardly ever retired to rest from my studies till midnight, which was the first source of injury to my eyes, to the natural weakness of which were added frequent headaches; all of which not retarding my eagerness after knowledge, he took care to have me instructed daily both at school and by other masters at home."

From St. Paul's School Milton, at 17 years of age, was entered at Christ College, Cambridge. There he remained for 7 or 8 years, and the series of Greek and Latin classics are said to have been laid under contribution by this lover of book-learning. When still young, Milton was an author as well as a student. He was 17 when he wrote his first *original* poem, "On the Death of a Fair Infant;" and when he came of age he composed the "Hymn on the Morning of Christ's Nativity," which served "by its chaste and elevated style, its grandeur of thought, and solemn wave-like march of rhythm," to prefigure and foretell the achievements of his later years.

When Milton had reached his 23rd year he left Cambridge, and it is in connection with this that an event occurred revealing to us the character and inner principles of his life.

Milton had been brought up in a religious household, and it is not surprising that the father should have intended his son to be a clergyman of the Protestant Church, and an advocate of those convictions for the sake of which he had himself, early in life, made serious sacrifices. But if John Milton the father had thought and acted for himself, John Milton the son did the same in his turn.

John Milton *the father* would not profess the creed of a Roman Catholic, and John Milton *the son* would not sign his name to a declaration in which he did not thoroughly believe, though he could not otherwise reap the worldly benefit of his 7 years' residence at the university.

"By the intentions of my parents and friends I was destined of a child to the service of the church, and in my own resolutions; till, coming to some maturity of years, and perceiving what tyranny had invaded the church, that he who would take orders must subscribe, *slave*, and take an oath withal, which, unless he took with a conscience that he would relish, he must either straight perjure, or split his faith, *I thought better to prefer a blameless silence before the sacred office of speaking, bought and begun with servitude and forswearing.*"

John Milton, who would not subscribe himself *slave* at Cambridge, was in danger of becoming in turn intolerant towards others.

Milton's father played a magnanimous part towards his son, and, in a clear-sighted generous fashion, refrained from pressing him in any way to enter the church.

The next five years of Milton's life were spent at his father's country house at Horton, in Buckinghamshire. It was during this period that Milton wrote the two companion poems, each one the counterpart of the other, to which he gave the titles of "*L'Allegro*" and "*Il Penseroso*." He also wrote the "*Elegy of Lycidas*," in which he mourned the loss of a dear friend and fellow-student. Besides these he also composed the "*Masque of Comus*."

Milton was a puritan, and yet he wrote a stage play. But Milton's conversion to puritanism was not a case of sudden conversion; with him it was a thing of slow growth, and at all times tempered by a genius which was in sympathy with whatsoever was pure and natural, in the best sense of the word.

Milton expresses his admiration for the fancy, the beauty, the wisdom, and the eloquence of the chief of the playwrights in that sonnet which were the first published lines of his:—

"Dear son of memory, great heir of fame!
 What need'st thou such weak witness to thy name?
 Thou in our wonder and astonishment,
 Hast built thyself a live-long monument.
 * * * * *
 And so sepulchred in such pomp dost lie,
 That kings, for such a tomb, would wish to die!"

It is characteristic of Milton that he had a noble and serious religious purpose in the construction of his "*Comus*." The idea, gracefully worked out, is that purity is its own defence; that nothing can withstand the inward grace of an unsullied soul. To work out and illustrate this beautiful truth was the object of Milton in writing his lyric play.

In the year 1637, Milton started on a short tour in the south of Europe. He spent a good deal of his time at Florence, where, in one of the gaols, he visited Galileo. "There it was that I found and visited the famous Galileo, grown old, a prisoner in the Inquisition, for thinking in astronomy otherwise than the Franciscan and Dominican licensers thought." Milton, in his visit to Galileo, found that liberty of thought was practised in England to an extent not dreamed of abroad. He was at Naples in the year 1638, and was then 30 years of age, when news reached him that there were troubles in England. He determined to return home: "Inasmuch as I thought it base to be travelling at my ease for intellectual culture, while my fellow-countrymen at home were fighting for liberty." With Milton study and travel were the luxury and joy of existence; yet he relinquished both to take his share of national trouble and civil strife.

From the time of the Norman Conquest, government had been in England what we may term a three-sided affair. The *king*, the *barons*, and the *people* had each been in turn, and with varying degrees of influence and success, working as factors to produce the result. At first the struggle for power lay chiefly between the king and the more powerful of the barons; the king endeavouring to dominate over the nobles, and the nobles, on the other hand, working with all their power to check and overrule the king in the exercise of the royal prerogatives. But as the country began to get into a more settled state, as the Saxon serfs grew free and intelligent, *then* the *common people* began to rise into notice. Neither king nor barons could afford to despise the commonalty, and each in turn bid for their support.

When James I. succeeded Elizabeth, the charm of royal popularity seems to have been broken. James I. was unlike Queen Elizabeth in several very important particulars. He had neither the indomitable will, nor the fiery patriotism, nor the shrewd patience, necessary to maintain the dignity and authority of the throne. Troubles soon arose. The nobles began to chafe beneath the royal pretensions; and the now rising middle classes did not allow the new monarch exactly to take the place of the old in their affections.

If we take into account what the state of England was when Milton returned to England, and remember also the sort of man he was, we must come to the conclusion that Milton was bound by his character, education, and the nobleness of his mind, to take one side or the other. It was not possible to remain neutral; and it is not difficult to find reasons why he chose the side of the Parliament. Milton was a Protestant and the son of a Protestant. He was a *religious puritan*; the person and court of Charles would deeply offend his sense of morality. He was a *loving student of the classics*; the republics of Greece and Rome would fire his imagination, and awaken in him the hope of a more free and noble England. He had a *generous, sympathetic soul*; the sufferings and dangers of those who were bearing the burden of royal displeasure would excite in him a

feeling of compassion, and move him with a desire to share in their work and to bear a part in their burden.

Milton had just returned from a tour in Europe; he had there seen and heard of acts of kingly and priestly tyranny; and this no doubt made him the more eager to help in preventing the possibility of such scenes in his own country. Within the scope of his genius, Milton at once entered into the struggles and controversies that divided the nation into two hostile camps, which even separated in some cases husband from wife, father from child. Milton enjoyed the personal respect of some who took the opposite side; and at no time was tempted into seeking that popularity which is bought by the sacrifice of individual judgment or suppression of the truth. In this civil war Milton had more the character of a judge than that of an advocate. He preferred, as he beautifully phrased it, "Lady Truth to King Charles." He spake the plain, unpleasing truth, right out in the face of an excited and triumphant people, flushed with victory and success; and this in no fickle fashion, but as the expression of principles in which he believed with his whole soul.

Speaking in praise of Cromwell, he said:—

"Cromwell, our chief of men, who through a cloud
Not of war only, but detraction rude,
Guided by faith and matchless fortitude
To peace and truth thy glorious way hast ploughed."

But in the very same sonnet he reminds the great Lord-Protector of his duty, and implores him to heal the country's wounds by peace and conciliation.

He pointed out to the people that there may be in a nation worse things than kingly tyranny, greater afflictions even than a civil war; there may be evil influences, selfishness, luxury, hypocrisy, diseases in the social body, which silently eat away the vital power of the nation.

Milton started from great principles; in these he had unswerving faith, and he applied them to solve the questions of his own day. "I perceived that there were three species of liberty which are essential to the happiness of social life—religious liberty, domestic liberty, and civil liberty."

The Commonwealth was a failure; it was a form of government for which the nation was not then prepared. There was not enough of good honest soil for the growth of the stately tree of a Commonwealth. At that period, too, the army possessed an ascendancy fatal to free government. Cromwell could make himself a dictator-king, but the power established by the sword melted away when the arm that had wielded the sword was helpless in death. Failure was the result in England.

In the English Revolution there was the great common book, the Bible, the volume paramount. And there were also men in both parties of deep earnestness, who "put their trust in God." The Restoration brought with it a state of things which must needs have

been a severe trial of faith, a period of shame and confusion to a man of Milton's lofty political aspirations. Think, then, of the picture of John Milton in "his small chamber, hung with rusty green, sitting in an elbow-chair, and dressed neatly in black; pale, his grey eyes sightless, though free from blemish and from outward spot." He used "to sit in a grey coarse cloth coat at the door of his house near Bunhill Fields, enjoying the fresh air and receiving the visits of people of distinguished parts as well as quality."

Milton had lost a great part of his slender property by the fire of London; he was proscribed, indebted for life and property to the influence of a powerful and magnanimous court friend. It is even said that he lived for some time in fear of assassination. His hope of seeing established a noble and worthy republic was dashed to pieces.

It was on the 8th of November, 1674, that the end came, and four days later his body was buried in the church of St. Giles, Cripplegate. But not only is the "rich melody" of the poet's songs with us. Milton has left behind him also a life-poem, a grand example of stern integrity, of unbending courage, of conviction chastened and tempered by generous culture, and illumined by the unfading light of religious resignation.

"Milton, thou should'st be living at this hour;
Thou hadst a voice whose sound was like the sea,
Pure as the naked heavens, majestic, free;
So didst thou travel on life's common way
In cheerful godliness; and yet thy heart
The lowliest duties on herself did lay."

Two thoughts are suggested by this study of the life and times of Milton—one of personal encouragement, the other of national hope and confidence. If we had lived in England two hundred years ago, we should most likely have pronounced Milton's life a failure; yet it was a success in every worthy sense, because it was an unswerving recognition of the sacredness of duty.

Milton had an almost transcendental ideal of the English nation. He believed that the nation was something more than a mere collection of human beings; that there was a national conscience to be kept pure, as well as a national army to be kept strong, and a national exchequer to be kept full. He no more believed in the right divine of nations to do wrong than he did in the divine rights of kings. And Milton believed that so long as this faith held its place in the nation there was ground for infinite hope for the people of England.

In the history the events should be treated in still greater detail, and the lessons should be prepared in a more connected and less abbreviated form than in Notes of

Lessons. The types previously given may be useful as indications of the way in which the teaching notes of the subject should be followed.

COMPOSITION AND ARITHMETIC.

It may be assumed that the teacher who has studied the earlier portion of the book has now become sufficiently skilful to act on his own unguided strength, in teaching writing and arithmetic.

CLASS SUBJECTS (STANDARD VI.).

ENGLISH.—“*To recite fifty lines from Shakespeare or Milton, or some other standard author, and to explain the words and allusions.*”

[This should be a passage taken out of the matter selected for reading; but dealt with in more grammatical and analytical detail.]

“*To parse and analyze complex sentences, and to know the meaning and use of Latin prefixes in the formation of English words.*” (New Code, 1883.)

The subject matter for these will be found in most text-books on grammar.

GEOGRAPHY.

“*Geography of the world generally, and especially of the British Colonies and dependencies; interchange of productions; circumstances which determine climate.*” (New Code, 1883.)

The geography of the Colonies will be found in the “Pupil Teacher’s Geography of the Colonies,” and other text-books.

INTERCHANGE OF PRODUCTIONS.—The earth is divided into *Tropical*, *Temperate*, and *Frigid Zones*. In the first, the climate and absence of winter preclude any need for forethought, and man reposes in inaction. In the Frigid zones he struggles for bare necessities of life, and the climate yields little supplies of food for the natives, and none for export.

In the Temperate regions we have “the workshop of the world;” here man exists with the greatest energy, civilization, and density of population. Here also thrive best the *animals* and *plants* most useful to man—ox, sheep, horse; cereals (wheat, barley, maize, oats, rye); pine, oak, ash, elm, beech (the most useful for houses, tools, conveyances, machinery). Here also the most useful *minerals* abound—iron, tin, copper, lead, coal.

Of the continents, Europe is the most indented in its coast-line, and therefore she imports and exports the most; all the world brings to her tribute of natural productions—tea, coffee, sugar, cotton, wool, etc.; and to all the world she exports manufactured articles—machinery, calico, etc., etc. This is again specially true of Great Britain, because of its insular position, its place in the centre of the “Land Hemisphere,” its stores of coal and iron, its flourishing colonies, and the industry of its people.

CIRCUMSTANCES WHICH DETERMINE CLIMATE.

Climate is the sum total of the “weather” taken over a wide range of space and time; and hence comprises *Moisture*, *Temperature*, and *Wind* (in intensity, direction, and duration).

- I. LATITUDE.—These vary most with latitude, as on this depends the altitude of the sun at mid-day.
- II. ELEVATION.—The hottest being the lowest. The snow-line is found even under the equator at the

tops of mountains. These elevated regions radiate their heat into space, instead of sending it into the water-vapour of the atmosphere as in lower levels, to be radiated back towards the earth.

- III. ADJOINING SHEETS OF LAND OR WATER.—Land soon takes up and gives out heat. Water is slow in absorbing and in radiating heat; hence water tempers heat in summer and cold in winter, and makes a climate “insular;” whereas in the middle of land masses the climate is “extreme” in both seasons. Contrast Moscow and Edinburgh in same latitude, or West Europe and Central Asia.
- IV. DIRECTION OF MOUNTAIN CHAINS.—Those running E. and W. have in N. hemisphere cold countries in N. and warmer in S. Contrast Switzerland and N. Italy (but Switzerland is also *elevated*, and N. Italy is a plain).
- V. NATURE OF SOIL.—If bare, the heat is reflected and radiated; the water runs off in floods. If forest-clad, the heat is tempered and the soil and air retain moisture; cultivation improves climate by drainage, felling forests, etc.
- VI. PREVAILING WINDS.—Those from sea surfaces are moist and cool; those from land surfaces dry, and in summer hot, in winter cold. Contrast the S.W. winds of England from the Atlantic with the sirocco or simoon of Africa and Arabia.
- VII. PREVAILING CURRENTS.—These are cold (Arctic and Antarctic), or warm (Gulf Stream, etc.). Those flowing towards the poles take warm water, and make the climate warmer; those bringing water from the poles (mostly, however, on the flood of the ocean) are cold. Contrast W. coast of Europe

(or N. America) with E. coast of America (or Asia).

VIII. ASPECT.—If the land slopes from the sun the climate is colder, and *vice versâ*. See British North America.

NEEDLEWORK.

- (1) To cut out and tack together a pattern of girl's chemise or child's frock body, and graft 3 inches in stocking material.
- (2) To darn on calico or linen a diagonal cut $\frac{1}{2}$ inch long.
- (3) To darn a three-cornered (or hedge) tear with sides 1 inch long on some dress material, or to put in a patch on some dress material.
- (4) On a prepared piece of knitting with 4 pins, divide for and knit a thickened heel, turn it, pick up the gusset, knit three rows, and cast off.
- (5) To hem and whip 6 inches of frill and set on to a calico band, and mark on the band one of own initials.

Optional.—*To Swiss darn a square inch on stocking material, and on a calico hem work 2 inches of coral stitch and 2 inches of knotting. (This is for Standard VII. only.)*

Material required.

- (1) A piece of tissue or lined paper and a piece of stocking web, 3 inches square.
- (2) A piece of calico or linen 3 inches square.
- (3) A piece of dress material 5 inches square and one piece $2\frac{1}{2}$ inches square.

- (4) A piece of knitting on four pins containing five rows of 41 loops.
 - (5) A piece of mull muslin 6 inches by 1, and a piece of calico 3 inches square.
- Optional.—*A piece of stocking web 3 inches square, and a piece of calico 7 inches by 3.*

CHAPTER XXI.

SCHEDULE I. (STANDARD VII.).

READING and WRITING as in Standard VI.

"In Standard VII., in order to warrant a pass, the theme should exhibit something more of structural character and arrangement, the sense should be clear, the expressions fairly well chosen, and the writing, spelling, and grammar free from ordinary faults." (Instructions to Inspectors.)

ARITHMETIC. — *"Averages, Percentages, Discount, Stocks."* (New Code, 1883.)

SCHEDULE II.: CLASS SUBJECTS.

ENGLISH.—Recitation or Analysis as in VI. (See p. 292.)

"To know prefixes and terminations generally." (New Code, 1883.)

GEOGRAPHY.—*"The Ocean, Currents, and Tides; General arrangement of the Planetary System; the Phases of the Moon."*

For the Ocean, Currents, and Tides, the "Pupil Teacher's Geography," "America and the Oceans," may be consulted. In addition, the following pages will furnish condensed teaching notes:—

GENERAL ARRANGEMENT OF THE PLANETARY SYSTEM.—By

means of a diagram, or drawing made on the blackboard by the teacher, the *Solar System* should be explained. This has the sun in the centre, round which the planets revolve in *orbits* at different distances. Around the planets the *satellites* likewise revolve. The planets nearer the sun than the earth are called the *inferior*, those without the earth's orbit the *superior* planets. The former comprise *Mercury* and *Venus*; the latter, *Mars*, the *minor planets*, *Jupiter*, *Saturn*, *Uranus*, and *Neptune*. The inferior undergo phases like the moon, and for similar reasons.

When an inferior planet, the sun, and the earth are in one straight line, the planet is said to be in *conjunction*; viz. "superior conjunction," when on the other side of the sun; "inferior," when on the same side as the earth.

When a superior planet is on the opposite side of the heavens from the sun and nearest the earth, it is said to be in *opposition*; when on the same side, and farthest from the earth, in *conjunction*.

The planes of the orbits of the planets to the ecliptic (the plane of the earth's orbit) vary; as does also the time of their revolution on their axes, and of their revolution round the sun.

The orbit of each planet is an *ellipse*, of which the sun is in one *focus* (centre of an ellipse); therefore their distances from the sun vary at different times, as is the case with the earth.

There is a certain proportion between the times of the revolutions of the planets round the sun, and of their distances from it.

The path of the planets is dependent upon an original impulsive force sending the planet away from the sun (*centrifugal force*), and the attraction of the sun, drawing the planets towards it (*centripetal force*). These two forces are obeyed by the planet taking a circular course round the centre of the solar system (the sun).

The *minor planets* number rather more than one hundred. The planets which have *satellites* (moons) are the Earth (1), Jupiter (4), Saturn (8), Uranus (4), and Neptune (1). The four nearest planets to the sun are smaller than the rest, and very dense (heavy); the four exterior are very large, and not so dense.

MERCURY shows like a star close to the sun, in the west a little after sunset, or in the east a little before sunrise. It is about three thousand miles in diameter. When it comes direct between the earth and the sun it is said to be *in transit*, and appears on the sun like a round black spot.

VENUS.—This is the most brilliant of the planets; distant about sixty-six million miles from the sun; its diameter is about seven thousand five hundred miles. It is known as the "Morning" and "Evening Star," when seen at sunrise and sunset near the sun, and is often visible to the naked eye. It has transits like those of Mercury.

THE EARTH is distant from the sun about ninety-one millions of miles; is about eight thousand miles in diameter, and, like the others, is flattened at the poles, and has a diurnal and annual motion, the former on its own axis, the latter round the sun.

Proofs of Rotundity.—(1) It has been circumnavigated in every direction which the configuration of the land allows.

(2) When a vessel recedes from the land, a spectator on shore loses sight of the hull, then of the lower sails, and finally of the tops of the masts. To those on board, the reverse phenomenon is observed; they lose sight of the shore, then of the houses, then of the tops of spires, and lastly of the tops of high hills (and mountains if any are in the vicinity). These appearances *must* be occasioned by the convex shape of the earth intervening between the shore and vessel. *The effect of distance only diminishes the size and brightness of objects, and in no way alters their forms.*

(3) The sun rises earlier to the east and later to the west of us, but if the earth were a plane he would be visible over all the world at the same time. Sunrise is earlier six seconds for every mile we travel eastward in Great Britain.

(4) If we travel north or south, the pole star appears to ascend or descend according to the space passed over, and while stars with which we are familiar will appear to sink new stars appear.

(5) When ascending after sunset, aeronauts have observed that as they do so the sun comes again into view, rising on their western horizon, while the earth below them is in profound darkness. If the earth were a plane, a slight depression below the horizon would cast in shadow the highest altitude to which the aeronaut could ascend.

(6) In eclipses of the moon the shadow is *always circular*, and no other body than a sphere casts a circular shadow in whatever direction the light may shine on it.

(7) In construction of canals and similar hydrographic works, an allowance of eight inches to the mile must be made for the earth's curvature. This also affords an idea of its size—a globe requires a diameter of 7920 miles to allow a curvature of eight inches to the mile.

(8) If on a level sheet of water of considerable extent three staves six feet in length be erected, one in the centre and one at each end, and we look from the top of the first to that of the last, it will be found that the line of sight intersects the central staff at a distance from the top, depending on the length of the sheet of water on whose surface the experiment is tried. This proves that the surface of the water is not level, but heaped up at the centre.

(9) In accordance with its motion as a planet, it could have no other form.

(10) Three angles of every plane triangle are together

= two right angles, while three angles of a spherical triangle are together greater than two right angles. In trigonometrical surveys it has been observed that the sum of three angles of triangles drawn on its surface is *greater than two right angles. Consequently the earth must be spherical.*

(11) The reflection from convex mirrors gives different images from those of plane mirrors; and the images of trees, houses, etc., thrown from the surfaces of lakes are such only as could be given from convex surfaces.

MARS is of a fiery red colour, and is about half the diameter of the earth, its day being nearly twenty-four hours long.

THE MINOR PLANETS fill the gap between Mars and Jupiter, and hence their existence was suspected before they were detected by the telescope.

They are of very varying size, but all small, one only twelve miles in diameter.

JUPITER is the largest of the planets, its diameter being more than ten times that of the earth, giving a size $10^3 = 1000$ times greater than our planet's. It is often visible to the naked eye. When seen through the telescope, it appears *belted* in parallel lines. It takes only about ten hours to revolve on its axis, so that its day (and night) is about ten hours long. Its four satellites can be seen only with the telescope.

SATURN is the next largest planet, its diameter being nearly ten times that of the earth. It is visible to the naked eye when nearest the earth (at *opposition*), and is "belted" like Jupiter.

It has a broad, thin, flat ring round it, separated from the main body of the planet, and this ring casts a shadow on the planet. The satellites of Saturn are eight in number, each revolving on its own axis, and travelling round the planet.

URANUS has four satellites, which revolve in the opposite direction from that of the rest of the planets and of their satellites (except that of Neptune).

NEPTUNE is about five times the diameter of the earth, and has one satellite, which revolves in the same direction as those of Uranus.

COMETS.—Besides the planets, are comets. These are hazy, luminous bodies, generally with a *head*, *tail*, and *nucleus*, the tail being turned from the sun. They are visible for a short time only, travelling rapidly into and out of sight. They travel in all directions round the sun.

Sometimes the tails of comets are forked or branching.

PHASES OF THE MOON.—The moon revolves round the earth once in a month at about a quarter of a million miles distance. Its diameter is about a fourth that of the earth. It is opaque, and shines by the reflected light of the sun. When it is between the earth and the sun, its bright side is turned from us, and it is invisible. When it is on the opposite side to the sun, its bright side is turned towards us, and it is "full moon." When it is half-way between these two points, we see only half of its bright side; or it is then "half moon." In going round its orbit, it therefore has phases or appearances, ranging from a full circle to nothing, as seen in diagram (to be drawn by the teacher on the blackboard).

CHAPTER XXII.

DRILL.

THE following exercises should be first learned by practice by the teacher, and then taught to the class. They are given at sufficient length for any one to understand without previous knowledge of the subject, but will require patience in learning and teaching.

METHOD OF TAKING "OPEN ORDER" FOR CALISTHENICS AND
EXTENSION MOTIONS.

Scholars stand in line (between desks or about 2 paces apart from front to rear), shoulder to shoulder, knees straight, heels together, toes turned out at an angle of about 45° , eyes looking straight to front, hands close to sides, shoulders back. At the order "Eyes left" (or right), children turn heads in the named direction, keeping perfectly erect. Those at the flank, from which the extension is being made, look straight to front and stand steady.

At the word "Dress," in the order, "Half Distance—Dress," children take short quick side steps to the right (if dressing from the left), or to the left (if dressing from the right). The side step should be done in perfect time to the order, "Right," "Left," giving the word "Right" if moving to the right, or "Left" if to the left. Let the first word be equal in duration to a "quaver," and the second to a "crotchet." As soon as there is room children extend the left (or right) arm, and touch the shoulder of the one on their left (or right) with the tips of the fingers; thumbs to the rear; stepping forward or backward with the whole body, until they can see the lower part of the face of the child next but one on their left (or right.) During the whole of this movement heads will be kept turned to the named flank. When every left (or right) arm is extended, and the children are standing correctly, the order "Eyes

front" is given; upon which, the whole of the hands drop to sides, and eyes look to front. The whole stand perfectly still.

Before commencing the practices, the children should make a half right (or half left) turn.

CALISTHENICS IN SEVEN PRACTICES.

Caution: First Practice.

One.—Bring the hands up with the closed fists in front of chest, backs of hands to front, thumbs pointing upwards and touching at the ends. Elbows pointing right and left.

Two.—Thrust arms straight out to front with the palms of hands together. Thumbs close to forefinger and level with chin.

Three.—Throw arms well back in line with shoulders, at the same time turning palms of hands upwards and raising the heels from the ground. The arms must hang down.

Four.—Drop hands to sides and heels down.

After "Three" the order "Continue the practice" may be given, upon which children judge their own time, or instructor may beat time for them. When the instructor is satisfied that the motions are done correctly, he will give the order "Steady," upon which children remain at "Three." "Four" brings them to attention.

Caution: Second Practice.

One.—Thrust arms straight out to the front, level with chin, thumbs together, palm downwards.

Two.—Bring the arms smartly back, upper arm close to side, palms of hands to front, with ends of thumbs about in line with the points of shoulders, press the arms and shoulders as far back as possible.

Here the order, "Continue the motions" may be given, whereupon these two motions are repeated as many times as the instructor thinks necessary. "Steady" will bring children to "Two."

Three.—Throw out arms from sides to right and left, with palms of hands to front, thumbs touching forefingers. At same time raise heels off the ground.

Four.—Drop hands to sides, and heels down.

The first and second motions of this practice can be done by children standing or sitting together in class.

Caution: Third Practice.

One.—Raise the arms in front of chest, with closed hands, backs of hands to front and immediately below the chin, elbows together, little fingers touching each other.

Two.—Separate the arms, bring them smartly back with the closed hands (which should be tightly squeezed) about in line with the tops of shoulders, press them well back.

Here "Continue the motions" may be given as before.

Three.—Open the hands, throw the arms well out to the side, with the palms of hands to front. At the same time raise the heels.

Four.—Drop hands to sides.

"One" and "Two" are done in class as in Second Practice.

Caution : Fourth Practice.

It will be necessary to turn the children to the right (or left) before commencing this.

One.—Raise the hands smartly from the sides, bringing the palms together in line with the mouth, and at full length of the arms.

Two.—Separate the hands smartly, throwing them well back until the backs of the hands meet together in rear. At the same time raise the heels and bend slightly forward.

Continue the motions as before.

Three.—Drop hands to sides, and heels down.

Caution : Fifth Practice. Position as in Third Practice.

One.—Raise the arms smartly up from sides, double the arms, bringing the fingers into the arm-pits, backs of hands downwards. Raise the heels.

Two.—Drop the hands to sides, and heels down.

Continue the motions as before.

This practice can be done by children standing in class if turned to right (or left) or half right (or left).

Caution : Sixth Practice.

One.—Bring the backs of the hands together in front at the full extent of arms, thumbs touching forefingers and close to body.

Two.—Raise the hands in front of chest, with backs of fingers touching each other, and pointing to the feet.

Three.—Bring the hands over the tops of the shoulders, with the ends of the fingers touching the shoulders.

Four.—Throw the arms smartly out right and left, at full length from the sides, palms of hands uppermost.

Five.—Drop arms to sides.

Continue the practice as before.

Done in class as with Fifth Practice.

Caution : Seventh Practice.

One.—See "Three" in Sixth Practice.

Two.—Throw up the arms straight over the head, palms of the

hands to the front, fingers straight and touching each other, thumbs touching forefingers.

Three.—See "Two" in Second Practice.

Four.—Throw out arms at full length from the sides, with palms of hands to the front.

Five.—Drop arms to sides.

Continue the practice as before.

Done in class as with Fifth Practice.

EXTENSION MOTIONS: 3 PRACTICES, AS PER ARMY RED-BOOK.

Caution: First Practice.

One.—On the word "One," bring the hands, at the full extent of the arms, to the front, close to the body, knuckles downwards, till fingers meet at the points; then raise them in a circular direction over the head, the ends of the fingers still touching and pointing downwards so as to touch the cap, thumbs pointing to the rear, elbows pressed back, shoulders kept down.

Two.—On the word "Two," throw the hands up, extending the arms smartly upwards, palms of the hands inwards; then force them obliquely back, and gradually let them fall to the position of "attention," elevating the neck and chest as much as possible.

Three.—On the word "Three," raise the arms outwards from the sides without bending the elbows, pressing the shoulders back, until the hands meet above the head, palms to the front, fingers pointing upwards, thumbs locked, left thumb in front.

Four.—On the word "Four," bend over until the hands touch the feet, keeping the arms and knees straight; after a slight pause raise the body gradually, bring the arms to the sides, and resume the position of attention.

N.B.—The foregoing motions are to be done slowly, so that the muscles may be exerted throughout.

Caution: Second Practice.

One.—On the word "One," raise the hands in front of the body, to the full extent of the arms, and in line with the mouth, palms meeting, but without noise, thumbs close to the forefingers.

Two.—On the word "Two," separate the hands smartly, throwing them well back, slanting downwards; at the same time raise the body on the fore part of the feet.

One, Two.—On the word "One," bring the arms forward to the position above described, and so on.

Three.—On the word "Three," smartly resume the position of attention.

In this practice the second motion may be continued without repeating the words "One," "Two," by giving the order, "Continue

the motion." On the word "Steady," remain at the second position, and on the word "Three," resume the position of attention.

Caution: Third Practice. Make a second half turn before commencing.

One.—On the word "One," raise the hands, with the fists clenched, in front of the body, at the full extent of the arms, and in line with the mouth, thumbs upwards, fingers touching.

Two.—On the word "Two," separate the hands smartly, throwing the arms back in line with the shoulders, back of the hands downwards.

Three.—On the word "Three," swing the arms round as quickly as possible from front to rear.

Steady.—On the word "Steady," resume the second position.

CHAPTER XXIII.

SCHOOL ORGANIZATION.

DISCIPLINE.

DISCIPLINE viewed subjectively is the active instrument by which good order, etc., is maintained. Viewed objectively it is the result of this special work of the teacher. Thus we say—(1) “The teacher’s discipline keeps the school machine noiselessly at work” (subjective); (2) “The master could not maintain discipline” (objective).

There is a third way in which the word is used, as “—, please take the discipline of the school.”

Objects arrived at in Discipline.—1. Order; 2. Quietness; 3. Attention; 4. Obedience; 5. Industry; 6. Moral discipline, good habits. Before taking up each of these we may point out that discipline depends on (a) the teacher; (b) his surroundings. The latter are mainly beyond the teacher’s control, and depend on size and shape of school; presence or want of class-room; government regulations fixing maximum width of schools; proximity of noisy streets; over-crowding beyond teacher’s control; proper apparatus, etc.

Means to secure Good Discipline.—(1) *Good organization*, especially in the matter of distribution of staff. Of course the most skilful teachers should be put to the most difficult work, *i.e.* the lower standards, taking care of course that the IV., V., and VI. Standard teachers have an amount of knowledge beyond the modicum of the class.

This distribution also should allow of teachers being shifted from class to class in the different years of apprenticeship, and from class to class according to subjects they can best deal with. This professorial method is the basis of organization in secondary schools, where there are the Mathematical, Classical, Modern, English, Music, Drawing, and Writing masters. This plan can be profitably carried out in our elementary schools more than is done at present.

(2) *Arrangement of Time Table.*—This should secure, as the first essential, silent lessons side by side with lessons necessitating noise, *i.e.* isolation as far as it can be got in a single room. The next essential is gymnastics, drill, and change from desks to floor. The gymnastics and drill strengthen the command of the teacher, and perfect the will of the child; by drill we get necessary movements made in the most uniform manner, in the quickest time, with the least noise. The change should be given to relieve the muscular restraint of the children.

1. *Order.*—By order in a class or school is meant—

(a) All children sit in the same position, if in desks sitting in full front, or with left side to desk, faces directed the same way, legs and arms in same position.

(b) Doing gymnastic exercises in the same time and with the same energy.

(c) Marching behind one another, with shoulders thrown back, head erect but not thrown back, eyes directed to their own level, neck not stiff, arms by the side with little finger touching the seams of the trousers, toes out. All motion to proceed from the hips, not to “dig” heels in floor, nor creep cat-like on the toes, but walk on the ball of the foot, with distance for a child to pass through; eyes on the middle of the back of the head of the child in front, with no rolling of the shoulders, and, of course, keeping step, and beginning with the left foot foremost. Marching

should be preceded by the orders, "Mark time; one, two; quick march."

(d) Order also refers to symmetrical distribution, and collection of materials and apparatus. Very often confusion arises from sending "squad of children" to fetch what the teacher should bring.

2. *Quietness*.—Some teachers can maintain order, but not quietness. The children talk though they are in good order, and pretend not to do so; there is a constant buzz of suppressed conversation, yet every child looks innocent. But, generally, order and quietness go together. On the other hand, there are some teachers that can maintain quietness, but only with idleness; the class must be doing nothing to be quiet; only while it stands "at attention" will it be not noisy.

3. *Attention*.—All attention must be voluntary to gratify present or secure future pleasure, to avoid present or future pain. Rewards and punishment are the educators of the will. Each child is endued with a sense of *power* under which it enjoys the exercise of its faculties. Hence the youngest children have their attention fixed by appeals to their senses, especially sight, hearing, and touch. As a child grows older more remote incentives than *present* punishment or pain, can be made a *primum mobile*. A mighty instrument in awakening and fixing attention, is the arousing of the spirit of inquiry or wonder. Not only give all the attraction possible to enlist attention, but remove all the distraction. Do not bring in such a lot of pictures, diagrams, or illustrative objects, to be all shown at once, that the child's attention is fixed on them, not on you; these are to illustrate the lesson, the lessons are not to illustrate the objects.

Some subjects are in themselves dull, as arithmetic in lower classes. These require the greater quickness and life in the teacher. This subject always indicates whether

the rest of the teaching in the school be intelligent or dull ; it is the one subject in which nimbleness and apprehensiveness can be taught to young children. Some children who appear wilful are really weak in will ; they are disobedient because they have not sufficient control over their will, motives do not sway them as they ought. Such individuals should be acted on by stronger incentives than others, but brute force should not be used towards them. The best instrument to give fixity of attention, *i.e.* power of abstraction, is mathematics.

By attention we mean the power of concentration of the mind upon a single object, *i.e.* the power of laying aside all the impressions of the senses but one out of all. As the eye sees only one spot at a time, so the mind only attends to one impression at a time ; the rest is memory.

The instruments for awakening and fixing attention are—
(i.) Wonder, surprise, curiosity ; (ii.) Spontaneity, love of activity, sense of power ; (iii.) Sympathy, love ; (iv.) The feeling of usefulness ; (v.) Emulation and love of praise, and sense of shame and reproof.

4. *Obedience*.—The obedience should be prompt and cheerful. A sullen unready obedience is more offensive than flat disobedience. This is best secured by drill, including gymnastics. Drill secures obedience without thought or reflection on the part of the drilled. In securing obedience the following points should be attended to :—

(1) Let the rules be *reasonable*, otherwise disobedience becomes almost justifiable.

(2) Let the rules be *definite*. It is an axiom in law that everybody knows the law. It is cruel therefore if the law be so written as to be unknowable.

(3) The law should not be like that of the Medes and Persians, but as near this as possible. Children are often wickedly ingenious in framing excuses to twist themselves out of the reach of a rule.

(4) *Give time* for obedience to be secured, but no more than is enough. If the orders be "one," "two," "three," "four," let "one" be done before "two" is begun, etc. Do not let the actions tumble over each other.

(5) Always *assume that obedience will be paid*; ignore the very idea of disobedience. Of course threats should, therefore, never be uttered to tempt disobedience.

(6) Let the *time be fully occupied* up to the full bent of the children either in work or play—"work while you work; play while you play." The human mind is like a millstone, that must grind a foreign substance or grind itself. In such lessons as Arithmetic and Writing, where one individual may finish work before another, give such a special copy, a special sum, but allow no idleness. Frequently a teacher fails in vocation because he or she fails in remembering "Satan finds some mischief still for idle hands to do." An almost hopeless subject is frequently redeemed by being converted into an office-bearer.

(7) Let orders be given in a firm decided manner, but not too loud. Remember a class is not a regiment, and that the schoolroom is not the open field, and that the school teacher is not a sergeant-major.

Wherever possible let a sign or a number be given instead of an order. "The less a teacher speaks, the more she will be heard."

5. *Industry*.—Intense application to set tasks. If there is love with this it becomes diligence, the work and the worker are identified. Two things are necessary to the highest success, viz. Genius and Industry; the first is rare, the second is within the reach of all except nomads.

A part of school work is to fix and prolong attention.

This is sometimes called concentration of thought or abstraction. It means attending only to one thing at a time, and putting away all diversions.

6. *Moral Discipline*.—This is one of the most difficult

words to explain that are used in pedagogy or the science of teaching. Tone is also one of the most difficult things to explain, but it is very easy to feel it in going into a school. In this respect it is like the influence of poetry and music. If the human body has a good muscular tone or tension about it, it is in a sound, healthy, vigorous condition, *consciously* and *unconsciously*, in sleep as much as when awake. If it has a low tone, that is, a low tension, it wants stringing up by a *tonic*. The moral tone of a school is like this, it imparts vigour all over and right through the school, including a host of things, such as honest work (no copying), fixity of attention, modesty, and courtesy, no Uriah Heapism (respect for others and self-respect), reverence to teachers, happiness and cheerfulness, truthfulness, and a sound public school opinion (without false honour). If the example of the teachers be not the whole, they are certainly the largest factors in the matter. The impersonation of high tone in schoolmasters was Dr. Arnold.

Good Habits.—By good habits we mean close-fitting costumes, which have become a part of ourselves, from long use they are automatic ; not loose as if they belonged not to us, nor tight and constrained, the aim being to secure points indicated under the heading “Good Tone.”

GOVERNMENT QUESTIONS.

- (1) *How do you secure an influence over your class, to repress that which is objectionable, and encourage all that is good ?*
- (2) *What children give most trouble, and how are they best kept in order ?*
- (3) *Give some distinguishing marks of good discipline.*
- (4) *What are the uses of a play-ground ? How can you*

make it subservient to discipline ? To what extent would you take part in children's play ?

(5) How would you enforce honesty, truthfulness, and kindness among children ?

(6) Show that copying, especially in Arithmetic, may be the result of bad teaching, or of bad discipline. How would you prevent it ?

(7) State the personal habits to be cultivated, the faults to be guarded against, and the examples that should be set by a teacher.

(8) How is the habit of attention best cultivated ?

(9) How would you deal with a child's first act of disobedience ?

(10) How would you impress on children the evil of acts of wanton mischief, petty thefts, or bullying younger children ?

REWARDS AND PUNISHMENTS.

It would be well to consider what should be the ends aimed at in "Rewards and Punishments." These are doubtless both justifiable in the hands of a schoolmaster, of the parent, or the State, as they are the instruments used by the Divine Ruler, or by Nature.

The connection of rewards and punishments, on the one hand, and doing "right" and "wrong" on the other, is the mental bond which springs up between the constant accompaniment of "right" doing with pleasure, and "wrong" doing with pain. That for which the child or the man is always punished becomes conceived of as wrong to do, and *vice versâ*.

Some think that the end of punishment should be solely the reformation of the individual punished ; and this latter, indeed, is a point gravely to be considered, and wherever *children* are concerned, it is the main point of consideration. (With them there is no penal servitude for

life, or death upon the scaffold, making it a matter of indifference to society whether there is any reformation of the individual or not.) But no circumstances will arise in which a child at school will show itself so utterly depraved that its individual reformation of character may be ignored.

The other end aimed at in punishment is to deter others from doing the like for which the criminal is punished. There are instances in school government in which this end should be brought very prominently forward, when the mercy that "seasons justice" should be mercy to the whole school, rather than to the culprit. The particular wickednesses referred to in this connection are such as are obnoxious to human nature : outbreaks of malicious spite, incendiarism, malignant cruelty to animals, and other acts not mere impulses or failings due to our human infirmity.

One end, that ought never to be aimed at in punishment, is the satisfaction of any feeling of revenge on the part of the punisher ; and this alone is a sufficient reason why punishment should never, if possible, be inflicted immediately after the crime, if feelings of indignation are excited. It is also one reason why punishment should be left in the hands of the Head Teacher, who is the "Court of Ultimate Appeal," and who is, or ought to be, from age, experience, and judgment, incapable of this weakness of giving way to indignation. The justicer should be like justice—cold, impartial, immovable. On the other hand, one need not take at their word such hypocrites as pretend to feel more pain in giving than the culprits do in receiving punishment.

This subject of corporal punishment is one that awakens a good deal of individual opinion ; but we think it may be conceded that (1) corporal punishment should be excluded from the Infant School ; (2) that the less there is of it anywhere, the better for the children, and the teacher as well ; (3) the more skilful the teacher, the less there is of corporal

punishment ; (4) that the young mind is not in a fit frame for receiving knowledge when overshadowed by fear ; (5) that a child is full of spontaneity, that this is its very nature, and that the function of the educationist is not to punish the outbreak of this, but to direct its flow ; (6) that there ought to be very little corporal punishment in a Girls' School ; (7) that the whole question depends, a good deal, on the skilful substitution of other deterrents and reforming influences on the one hand, and an iron grip by the teacher over his own emotions on the other. The latter is the product of habit, and of a set determination not to be carried away by irritability.

At this point we have arrived at the close of our remarks on the "3 R's," and the Class Subjects. These have been taken *seriatim*, so that the teacher of each class might have his work brought together. The "Management" of the school, as a whole, belongs to the Head Teacher, and deals with *Registration, Discipline, Organization*, etc. This has been separately dealt with in "How to Earn the Merit Grant," Part I.

As the present treatise is intended not only for the practical work of the daily conduct of the class, but also for Examination purposes, we now proceed to give some of the questions on School Method and Management recently given at examinations for Queen's Scholarships and Certificates, with model answers to some of these. For the better understanding of them, we must refer the Junior Teacher to Part I., since some of the questions will refer to the *general* conduct of the school.

In taking up special subjects of instruction in the different Standards we have aimed at two things :—

- (1) To give model lessons, as types of others.
- (2) To deal with those subjects, now for the first time

required, and which are not ordinarily treated of in text books.

The treatise, may, therefore, be found useful not only as a guide, but in some respects as a *Note-book* for the Junior Teacher. It will be noted that our remarks have been fewer and fewer as we have proceeded from the First to the Seventh Standard, as it was assumed that the teacher would refer to preceding pages. It was only in this way possible, within such a limited compass, to deal with the subject as a whole, and in separate portions.

Besides the questions set by the Government for testing the knowledge of method and management, others are given to test *originality, inventiveness, ability to compose well, and general intelligence*. These will be left to the student, as too frequent use of crutches may keep a patient lame.

QUESTIONS ALREADY GIVEN BY THE GOVERNMENT.

READING AND HISTORY.

(1) *What are the qualities of good reading? How may they be obtained?*

(2) *A reading lesson is often made to consist of explanation of difficult words, spelling, exposition of the meaning of a passage, reading proper, and questioning. In what order would you take these divisions, and what time would you assign to each in a reading lesson to boys of Standard IV.? Give your reasons.*

Answer. ORDER.—(a) *Spelling*.—This should consist of the hard words at the beginning or close of the passage read; of others selected by the teacher himself; or of the latter alone when none are marked in the reader. *Reason*.—These should first be taken, in order that the pupils may be able to read the passage consecutively, without the attention being broken by instructions on

pronunciation. *Time*.—This will vary with the difficulty of the passage to be read, but generally should not occupy more than about one-sixth of the whole time.

- (b) *Reading proper*, by the teacher and class, paragraph by paragraph. *Reason*.—Until the sentences are read, there will be no opportunity for explanation of words in their organic connections, and of difficult passages, or questioning. *Time*.—This should occupy the greater part of the time of the lesson.
- (c) *Questioning*.—Each difficult paragraph should be questioned on; but besides this, the class should be questioned on the scope of the lesson as a whole, to see that the general drift, the subject matter, and the logical sequence of parts, have been understood. *Reason*.—Until all has been read, it is impossible for the class to take a general view of the subject. *Time*.—This should, in general, occupy about five minutes.
- (d) After the explanations the whole passage may be read again, and the spellings and hard sentences set down for dictation. *Reason*.—This *resumé* is necessary to test whether the previous exercises have been properly done. *Time*.—About ten minutes.

(3) *Describe the manner in which you have been accustomed to conduct a reading lesson. Do you let the children read simultaneously, or only singly? How do you correct mistakes, and how do you endeavour to make the children understand what they read?*

(4) *What do you understand by expression, emphasis, and intonation in the reading?*

[*Ans.* Intonation refers to the modulation, or tone of the voice: high or low; loud or soft; impassioned or

pathetic; the rising and falling of the voice; the rendering of interrogation and admiration marks, etc.]

(5) *Explain how the reading of dialogue and recitation may be employed to remedy want of intelligence in reading.*

(6) *In a reading lesson for an upper class of children, what are the principal points to be considered? Explain the method to be adopted in such a lesson.*

(7) *How do you teach right accentuation?*

Ans. This refers to the pronunciation of words, especially as far as accent is concerned. The teacher should mark the accented syllables on the blackboard thus: *defer'*, *difference*, *contempla'tion*, *atōne*, *sinġ*, *cañon* (a river gulch), etc.

(8) *What is the object of simultaneous reading? How may its defects be supplied?*

(9) *For what reasons should more than one set of reading-books be employed in each class?*

Ans. To enlarge the vocabulary of the children; to prevent monotony; to increase the general intelligence of the children; to instil a love of reading; and to secure facility in reading.

(10) *How would you deal with indistinctness and slurring?*

(11) *Which subjects of instruction can be best taught by reading-books, and which by oral lessons? Give reasons in each case for your classification.*

Ans. Reading, as *Reading*, can be taught by books alone. Next to this comes *Recitation*, as the children should learn by the eyes rather than by the ear alone. Then follow in the upper Standards *History* and *Geography*, where the spelling of the proper names requires fixing by visual memory. Oral lessons should be mainly depended on for the teaching of arithmetic, grammar, elementary science, and the specific subjects, mental arithmetic, and singing; since these require *visû voce*

explanations from the teacher, and are beyond the unassisted power of the child.

(12) *What are the chief difficulties in learning to spell ?*

(13) *Give an easily intelligible exposition, as you would to a class of children, of the following stanza :—*

*“Beneath these rugged elms, that yew tree’s shade,
Where heaves the turf in many a mouldering heap,
Each in his narrow cell for ever laid,
The rude forefathers of the hamlet sleep.”*

Write it out in order of prose.

Ans. Tell the class whence this is quoted (Gray’s “Elegy”), and the general character of the poem. Next explain the meanings of the following words, giving their connotations (etymology) and denotations (things to which they refer) :—

Rugged, unshapely ; ragged ; through old age and want of trimming.

Yew tree, an evergreen, often found in churchyards, of dark, sober aspect.

Heaves, rises up. The *heaven* is that which is lifted up over our heads, and a *coal heaver* is a coal raiser and carrier.

Mouldering, turning to mould ; here *literally* the fact.

Cell, small chamber ; as of comb, of wood, or prison ; here of the grave.

Rude, unpolished, but not here unpolite.

Forefathers, the generation that preceded the present ; the fathers who were *before* those of the writer.

Hamlet, *let* is a diminutive ; *ham* (like the Scotch hame) is home, house, or dwelling, or, as here, a small cluster of such. *Ham* often occurs as a suffix for towns of Anglo-Saxon origin ; as Durham, etc.

Next paraphrase the passage.

(14) *Before reading the following passage to an intelligent first class, what words would you select for explanation, and*

by what principle would you be guided in the selection? Give also your explanation of the words selected: "This spirit of adventure, the reckless daring of his early man, took graver form in an activity that found time among the cares of state for study and translation, for learning poems, for instructing craftsmen, for teaching even falconers their business. He was a man careful of detail, laborious and methodical."

(15) *What is the use of learning to write when learning to read?*

(16) *What uses do you make of the blackboard in reading and spelling?*

(17) *In what shape may classes be arranged for reading? What should be the position of the teacher?*

(18) *In the following sentence explain the peculiar difficulties presented by the words printed in italics in the early stages of reading: "He would take no pains to teach any boy who could not at least write what boys of eight years old can write."*

(19) *What especial care would you bestow upon the less advanced readers in your class, before, during, and after the reading lesson? How can home lessons be utilized for teaching reading?*

(20) *What preparation is required in a reading lesson both for the individual words, and for the general sense of the passage? How may a reading lesson be divided to secure both the mechanical and intelligent mastering of a passage? State the proportion of time given to each division. (See No. 2.)*

(21) *Describe the various methods to teach spelling in your school. Did you rely chiefly on the eye or on the ear? How did you correct written exercises in spelling?*

(22) *Explain why biographies of eminent persons are more suitable for children than the histories of institutions.*

(23) *What is the best method of teaching history?*

(24) *Name some stories from English History that you have found to be most attractive to young children, and explain simply the causes of their attractiveness.*

WRITING.

(1) *Explain clearly the method by which a dictation lesson should be given to an upper class ; and show by what means you would occupy the children whilst you are over-looking the papers.*

(2) *Why should a passage in dictation be read over once only, and each paragraph afterwards read slowly and distinctly once only ?*

(3) *Before giving out dictation, what preparation is needed to prevent possible misspelling ? What use would you make of the blackboard in teaching writing, and in what classes ?*

(4) *What are the most common faults in writing ?*

(5) *What are the qualities of useful penmanship ? How may each of them be secured ?*

(6) *Give distinguishing marks of good large handwriting.*

(7) *Why should paper be used instead of slates in upper classes ? With which Standard would you begin the transition, and how would you facilitate it ?*

(8) *What are the chief difficulties to a child beginning small hand ? How would you deal with them ?*

Ans. The child already knows how to write, but the small size now presents a difficulty. His fingers have acquired muscular sweep, but are deficient in muscular discrimination. The writing is apt to become cramped.

These difficulties should be met by—

(a) Doubly-ruled lines, on slates and paper.

(b) Faint ink copies should be first traced.

(c) The child should be allowed to write but little at one time, and that slowly.

- (d) Vertical, or sloping, guiding lines should be given in the copy-book.
 - (e) The otherwise blank lines should have the initial letters of words engraved to keep the rest of the line in place.
 - (f) In writing in exercise-books, the copies on the blackboard should be large, and the formation explained.
 - (g) Special attention should be insisted on for the junctions.
 - (h) The paper should be kept at proper distance from the writer, as there is a tendency for the head to be brought too close to the desk.
 - (i) Top and bottom lines should be given for *h*, etc. and *y*, etc.
- (9) *Give the advantages and disadvantages of transcription and dictation respectively. How may these defects be guarded against?*

Ans. DICTATION.—*Advantages.*—(a) It can be used as a testing exercise for all the class.

- (b) It can be employed to teach other subjects (Geography, etc.).
- (c) The ear, as well as the eye, are employed; so that it teaches to read, as well as to write and spell.
- (d) It demands closer individual attention, and verbal memory; whereas, in transcription the thoughts of the writer may be wandering from his task.

Disadvantages.—(a) It is more of a testing than teaching exercise. This defect should be guarded against by giving derivations and meanings while dictating.

- (b) It fixes incorrect spelling by repetition. To prevent this ask for, or give, the spellings of the harder words, or let the class prepare these beforehand.
- (c) It leads to bad writing especially on slates. As a

check to this, let the class always write slowly, and on paper (except in Standards I. and II.).

TRANSCRIPTION.—*Advantages.*—(a) The copy presents the correct form of the spelling.

(b) Few mistakes require to be corrected.

(c) The attention of the child can be mainly given to the writing.

Disadvantages.—(a) It does not help reading. (A partial check on this will be the teacher's reading the passage before writing.)

(b) It is not educative, but mostly imitative; i.e. intelligence is little fostered by it. (This objection may be slightly removed by the teacher's exposition of the passage before transcription.)

(10) *By what rules would you be guided in selecting the extracts for transcription, or the subjects for composition for a class whose handwriting was well formed?*

(11) *How do you teach punctuation?*

ARITHMETIC.

(1) *Describe clearly the method by which children should be taught simple subtraction, and illustrate it by an example. On what principle do you select this method?*

(2) *Suggest three different ways of working the following sum: £339 16s. 2½d. × 145, and discuss the merits of each method as to simplicity, brevity of working, etc.*

(3) *Show that the difference between long and short division is one of form only, and not of principle.*

(4) *How can mental addition and subtraction of money be used to illustrate the first steps in simple addition and subtraction? What other illustrations would you employ? [Reference is here made to the different values of integers according to their position.]*

(5) *To what common uses may the avoirdupois, liquid, and*

square measures be applied? Give examples of such mental problems as you would employ in each of these tables for Fourth Standard children.

(6) *Write down the rules for working mentally the following sums: Prices of dozens, of scores, multiplying by 99, and dividing by 40.*

(7) *By what illustrations on the blackboard would you prove to children that $\frac{3}{4}$ of $\frac{7}{8} = \frac{21}{32}$, and $\frac{7}{8} - \frac{3}{4} = \frac{1}{8}$?*

(8) *The rule for multiplication by a fraction is "Divide by the denominator and multiply the result by the numerator." Explain the rule as you would to a class.*

(9) *Distinguish between numeration and notation, and give your method of teaching them.*

(10) *The rule for division by a fraction is "Invert the divisor and proceed as in multiplication." Prove the truth of this rule.*

(11) *By what method would you teach rule of three sums? State clearly the two methods commonly employed, and compare their advantages.*

(12) *Give a short sketch of an introductory lesson in compound proportion to a class knowing simple proportion by method of ratio.*

(13) *Show by a diagram that a square rod contains $30\frac{1}{4}$ square yards, and that multiplication by 27 is equivalent to multiplication by 9 first, and afterwards by 3.*

(14) *How would you teach compound addition to a class knowing only the simple rules?*

(15) *What methods were used in your school to prevent copying in arithmetic?*

ENGLISH.

(1) *What order should be followed in teaching the parts of speech? Give your reasons.*

(2) *What general rules of composition would you give to a class to write out from memory the substance of a short story?*

(3) *Write full notes for a first lesson on (a) a noun, (b) or an adjective, (c) or the the analysis of a sentence, (d) or a verb.*

(4) *What is Inflection ? What inflections have nouns and pronouns, and of what use are they ?*

(5) *Name some common faults of letter writing among children. From what cause do they proceed ? How would you correct them ?*

(6) *Show that grammar and composition may be taught simultaneously from the first. Give examples of such simple sentences as may be formed by Third Standard children to illustrate the positions of the verb and adjective in a simple sentence.*

(7) *Point out the incompleteness of the following definition : "An adverb is a word used to modify verbs."*

GEOGRAPHY.

(1) *To what uses may a blackboard be put in a Geography lesson ?*

Ans. (a) Map drawing, sketches of towns, rivers, etc.

(b) For diagrams of volcanoes, zones, latitude, longitude, etc.

(c) For spelling geographical names and terms.

(d) To outline the lesson.

(2) *By what illustrations would you give children first ideas of mountains and rivers (a) from their own experience, (b) on the blackboard.*

(3) *What simple method would you adopt to give a class some correct idea of the magnitude and measurement of the earth ? Explain in simple language the terms "Latitude" and "Longitude."*

(4) *How would you begin teaching geography to a class of young children ?*

(5) *A complaint is frequently made that geography is con-*

*fin*ed to a list of capes, heights of mountains, etc. How far are such lists useful? and for what purposes? Illustrate from your knowledge of British capes and mountains.

(6) Describe in words, and illustrate by a sketch map, (a) the panoramic view to be obtained from Skiddaw, or Arthur's Seat, or Cader Idris; or (b) a sail down the Thames from Oxford to Sheerness; or (c) a week's tour through the Western Highlands of Scotland; or (d) a sail down the Severn from Shrewsbury to the Bristol Channel.

(7) Write out in parallel columns full rules and black-board heads of a lesson on some county of England or Scotland.

(8) Describe the railway route from Liverpool to Glasgow, or from Perth to Edinburgh. Near, or over, what battlefields would the traveller pass?

(9) By what means would you teach little children the use and value of a map?

(10) By what means would you teach little children to distinguish a hill from a valley, a canal from a river, a lake from a sea, or an island from a peninsula?

(11) What is the best method of teaching children to understand (a) the ebb and flow of the tide; (b) latitude and longitude; (c) the difference between fog, dew, and cloud? Draw up notes of lessons on one of these.

(12) Illustrate that the earth is a sphere, and not a plain surface.

(13) Write full notes of a lesson on islands.

(14) What advantages accrue from lessons on geography in an elementary school?

NOTES OF LESSONS.

(Where these subjects are not given in Major's "Notes of Lessons," they should be specially prepared from reading-books, text-books, and the encyclopædia.)

The following subjects have been recently selected for Notes of Lessons by the Government :—

Numeration, Fractions, Compound Proportion, Cleanliness as essential to health, Healthy exercise, Ventilation of a school-room, "Eyes and no eyes," Conditions of health to be satisfied in building a house, Uses and pleasures of gardening, Economical method of warming rooms, Means of locomotion in large towns, Innocent popular amusements, A railway station, A flower show, The human hand, An apple, The human eye, Breadmaking, Coal, The ocean, A kitten, Use of iron, A complete sentence, Tobin's system of ventilation, "High interest implies weak security," Electric telegraph, Popular cheap literature, Rain, Carnivorous animals, Adverbs of time, Biography of some English or Scotch worthy.

REGISTRATION.

The subjoined extract from the New Code and Instructions to Inspectors, together with the actual experience of the teacher in the school, will afford the best means of answering the questions set by the Department on this subject :—

Attendance.—"An attendance" means attendance at secular instruction—

- (a) During one hour and a half in the case of a day scholar in a school or class for infants ;
- (b) During two hours in the case of a day scholar in a school or class for older children ;
- (c) During one hour in the case of an evening scholar.
- (d) The class registers must be marked and finally closed before the minimum time constituting an attendance begins. If any scholar entered in the register as attending is withdrawn from school before the time constituting an attendance is

complete, its entry of attendance should be at once cancelled.

- (e) The minimum time constituting an attendance may include an interval for recreation of not more than 15 minutes in a meeting of three hours or not more than 10 minutes in a shorter meeting.
- (f) For boys, military drill under a competent instructor for not more than two hours in any week or 40 hours in any school year; and for girls, lessons in practical cookery, where the inspector reports that special and appropriate provision is made for teaching it, for not more than 40 hours in any school year, are reckoned as instruction for the purposes of this article.

No attendance is, as a rule, recognized in a day school for any scholar under three years old, or in an evening school for any scholar under 14 or over 21, but children under 14 who are exempt from the legal obligation to attend school are recognized as scholars in an evening school.

Average Attendance.—The “average attendance” during any period is the number found by dividing the total number of “attendances” by the number of times on which the school met during such period.

For the purpose of calculating the average attendance, but for no other purpose, each “attendance” of a half-time scholar shall be counted as one attendance and a half. (New Code, 1883.)

Registration.—In view of the fact that the grant made to a school is mainly calculated on the average attendance, accurate registration of admission, progress, and attendance continues to be of essential importance, and will require special care on the part of managers and watchfulness on your own. In Appendix II. you will find a revised edition of the official rules, which have been long in force for the

proper keeping of registers, and it will be well to call the special attention of managers and teachers, especially in new schools, to the details set forth in that Appendix.

Irregularity of Attendance.—It must be clearly understood that irregularity of attendance, unless it is produced by some of the causes which constitute a reasonable excuse for absence, cannot be accepted as an excuse for the want of progress of any scholar. It has now become the interest of all concerned in the pecuniary results of the annual examination to increase the average yearly attendance by diminishing daily irregularities; but it may be hoped that higher motives will prompt all interested in education to press upon those entrusted with the execution of the law the actual legal obligation by which all parents are bound to present their children at the beginning of each meeting of the school. Cases of gross neglect on the part of the authorities, if brought to your notice, should form the subject of a special report to the Department. In your general judgment of the school, you will be careful to make allowances for all such neglect if the managers and teachers cannot be held responsible for it.

Excuses for Non-attendance on the Day of Examination.—The Code requires—

I. That all scholars whose names are on the registers of the school must be present at the inspection, unless there is a reasonable excuse for their absence.

II. That all such scholars whose names have at the end of the school year been on the register for the last 22 weeks during which the school has been open must be presented to the Inspector for examination.

Hitherto, since part of the grant was based upon the individual payment for the successful examination of all scholars who had attended 250 times in the course of the year, managers were interested in getting together all such scholars on the day of inspection. As the grant is now

based upon the average attendance of all the scholars, and will be adversely affected by the failure in examination of backward scholars, it will be your duty to see that every child, who is liable to be presented for examination, is present, unless there is a reasonable excuse on the day of examination, and to record the absent scholars on the schedule as if they had been present and had failed. If the number of absentees be large, the absences should be a positive disqualification for the mark "good" or "excellent" in assessing the merit grant. Among reasonable excuses, probably the most general will be found to be infectious disease in the home, storms, unavoidable absence from home, a death in the family, or the scholar's having left the neighbourhood. Beyond these it is not probable that many reasonable excuses will be found, though cases of an exceptional character may arise, and can only be decided on the day of inspection.

Withholding Children from Examination.—Many well-founded complaints have been made of undue pressure on backward scholars by keeping them in after school, by long home lessons, or by an injudicious use of emulation. The fact that a reasonable allowance may now be made for exceptional cases under Article 109 e, iii. will, it may be hoped, diminish this evil. Irregularity of attendance cannot be considered as a valid reason for withholding a child from examination; and managers of schools should refuse to countenance this plea, and should co-operate with all concerned in promoting greater regularity of attendance. The following excuses may, however, be reasonably accepted for withholding a scholar:—Delicate health or prolonged illness; obvious dulness or defective intellect; temporary deprivation, by accident or otherwise, of the use of eye or hand. But in order that all scholars whom it is proposed to withhold may not be neglected by a teacher, it will be your duty to look carefully through the

list of such scholars, and to form a personal judgment as to the reasonableness of the excuses.

Representation in the same Standard.—As a general rule, all scholars who have failed at the previous examination in any Standard in two subjects may be presented for a second time in that standard. The fact of such a failure can be attested in the case of scholars who were in the school at the previous examination by means of last year's schedule, which will be before you. In the case of children coming from other schools there may be a difficulty in obtaining evidence of the highest standard previously passed; but, as a general rule, it should be presumed that such children, if above 10 years of age, have passed Standard III., and all exceptions to this rule should be held to require explanation.

APPENDIX II.

[*Revised Circular on Registration of Attendance.*]

1. The Code requires that before any grant is made to a school the Education Department must be satisfied that suitable registers are provided, accurately kept, and periodically verified by the managers (Articles 8 and 96 c), and again under Article 115 the grant may be reduced upon the Inspector's report for faults of registration.

2. In every school there should be (1) a register of admission, progress, and withdrawal; (2) registers of daily attendance for all scholars; (3) a book of summaries. These registers must (Article 8) be provided by the managers out of the funds of the school, so as to be the property of the school, and not in any sense of the teacher.

Admission Register.

3. The Admission Register should be kept exclusively by the Head Teacher, and made up at least once a week. Suc-

cessive numbers should be allotted to the children on their admission, so that each child may have its own number, which it should retain throughout its school career. A child who returns to school after an absence of any duration would resume its original admission number. The name need not be re-entered in the Admission Book if the child is readmitted in the course of one school year.

4. No child's name should be removed from the register on account of absence for any period less than six weeks (except in case of death) unless the managers have ascertained, or the school attendance officer reports, that the child has left the school or neighbourhood.

5. This register should show distinctly for each child in the school (a) its number on the register; (b) the date of its admission or readmission, day, month, and year; (c) name in *full*, Christian and surname; (d) the name and address of its parent or guardian; (e) whether exemption from religious instruction is claimed; *(f) the exact date of the child's birth, day, month, and year; *(g) the last school (if any) which it attended before entering this school; *(h) the highest standard in which it was there presented; (i) the successive standards in which presented in *this* school; (k) the date of leaving.

6. When several children of the same name attend, they may be distinguished thus:—"John Jones (a)," "John Jones (b)," etc.

7. This register should have an alphabetical index.

Attendance Register.

8. *The Attendance Registers must be marked every time that the school meets*, however small the number of children

* Special care must be taken to obtain exact information on these points from the parents, former teachers, and registrar of births, if necessary.

present, and all attendances so marked must be taken into account. They should show the daily and weekly attendances of every scholar, beginning with the first day of the school year (Article 22) and continuing to the end of the same.

9. Adequate time for marking these registers should be provided for in the time tables, from 5 to 10 minutes or more, according to the number of scholars.

10. In mixed schools the boys should be entered in the upper part of a page, the girls in the lower, leaving a space between them.

11. On the outside of the cover of each register should be legibly written the name of the school, and the year, also the department (boys, girls, mixed, or infant, as the case may be) and the class or classes to which it belongs. All registers should be paged.

12. There should be columns for each child's admission number, for its name in full, and its age last birthday, and columns for all the weeks in the year, which should always be dated at their head with the day and the month. One also for the morning attendances and another for the afternoon attendances of every day, with a place at their foot for adding them up. A column for school pence received in each week is not unfrequently added to the attendance columns; but as this is apt to cause confusion in the additions, both of the pence and attendances, the pence columns had better be kept separate, unless entries be made in them in red ink. There should be a column for the entry at the close of each week of the total attendances made by each child during that week, and at the end of the register columns to sum up the total attendances of each child during the year. The Code requires a separate register for half-timers. The register for each class may be marked by the Pupil Teacher (if he have completed his second year) having charge of the class, but the Head

Teacher will be held responsible for its being regularly and properly kept.

13. In marking the attendance registers the following rules should be observed : (1) The registers must be marked and, excepting marks cancelled under 10 *infra* be finally closed at least two hours before the termination of the time given to the secular instruction at each meeting of the school, and at the time specified on the approved time table ; (2) after the registers are closed no child may be marked ; (3) children must be marked at each meeting of the school, (4) in ink, never in pencil inked over afterwards ; (5) presence must be marked with a long stroke, thus /, or \ ; (6) absence must be marked with an "a ;" (7) there must be no dots ; (8) no erasures, if any error has been made it must be corrected by a footnote ; (9) no blanks ; (10) if a child leaves before the two hours of secular instruction expire, its mark for presence should be cancelled by another stroke across it, thus x, and the total attendances for that meeting corrected by placing under them —1, —2, as the case may be ; (11) registers must be original and not copied from slates, papers, etc., on pretence of keeping them clean, or any other plea ; (12) the number of attendances made by the class should be entered at the foot of the column every morning and afternoon at the time for closing the registers ; (13) the number of attendances made by each child during the week must be entered ; (14) when a half or whole holiday occurs, or on the occasion of days set apart for special inspection, under section 76 of the Education Act (when the meeting, and attendances are *not* to be registered for the purpose of annual grants), a line should be drawn down the whole length of the column or columns ; (15) for longer periods "holiday" should be written across the columns.

14. At the foot of the attendance columns for each week, or in some place specially provided for them in the

registers, should be entered : (a) the number of times the school was open, morning and afternoon ; (b) the total number of attendances made by all the children on this register during the week.

15. At the foot of each pence column the total amount of pence received during the week.

Summary.

16. The *Summary* should contain (1) the weekly entries of the attendance of each class transferred from the class registers every week into appropriate pages, and the average attendance for each week ; (2) at the completion of the year the annual averages for the whole school should be struck and entered of boys and girls separately : (1) under 3, (2) between 3 and 7, (3) above 7, and (4) above 3, and the highest weekly average noted ; (3) the summary should be clear, and should at once show the results asked for in the managers' return, Form IX.

17. In this book the duplicate examination schedules and copies of the returns in Form IX. should be preserved, together with a list of scholars qualified to be presented, but not presented, with the reasons for their not being presented, and likewise the scholars presented a second time in the same standard, with the reasons for their being so presented.

General.

18. The managers' return (Form IX.) will contain a certificate that the registers have been checked at irregular intervals, and at least once in every quarter by the managers. To check the registers the managers, or some one deputed by them, should visit the school without previous notice after the registers ought to be closed, and ascertain that the number of attendances marked tallies exactly with the number of children then present. An

entry should also be made in the log book and in the registers at the time of checking them; they should also be signed at the same time by the teachers responsible for them.

19. *The managers' return should show by separate entries the number of admissions and readmissions in the course of the first and second halves of the year respectively.*

20. *Attendance registers, when filled, should be put away, and preserved for at least ten years. Admission registers and summaries should never be destroyed.*

21. *The above rules are intended for day schools, but should be applied as far as possible to evening schools.*

22. *My Lords do not at present insist upon uniform registers as a condition of annual grants, but they trust that by the co-operation of the managers of schools, such an extent of uniformity may be gradually introduced as to make the adoption hereafter of a uniform system of registers a matter of little difficulty.*

GOVERNMENT QUESTIONS ON REGISTRATION.

(1) *When should class registers be marked? What checks have you on their accuracy?*

(2) *How do you find the weekly and annual average of the whole school, and the highest weekly average in the year?*

(3) *When is it allowable to cancel an attendance mark, and how is this done?*

(4) *What registers are required in school? Give specimen page of each.*

(5) *What is meant by registers being closed at each attendance of the school?*

(6) *What register must be kept by the Head Teacher, and what permission is given for marking any other?*

(7) *How often must the register of attendance be marked?*

- (8) *What should be done with registers when filled ?*
 - (9) *How do you obtain the average attendance for the week, and for the year ?*
 - (10) *Why is it necessary to verify the registers at each school meeting ?*
 - (11) *Explain how you obtain (a) the average number of children in a class ; (b) the number of attendances made by each child in (i.) the week, (ii.) the quarter, (iii.) the year.*
 - (12) *How do you obtain the average number present during (a) the week, (b) the quarter, (c) the year ?*
 - (13) *Why should erasures never be permitted in the register or other school documents ?*
 - (14) *Explain the uses of an Admission Book.*
 - (15) *If a mistake were made in marking or casting up the registers, how should it be corrected ?*
 - (16) *Given the number of half days that each child has attended, and that the school has been open during a quarter, how do you find the average attendance for the quarter ?*
- [The other questions on Registration that have been set from time to time, are mere repetitions of the above in the same or equivalent language.]

MERIT GRANT.

There is no graver or more difficult task imposed upon H.M.'s Inspectors by the amended Code than that of assessing the merit grant. Your own experience must often have led you to conclude that the full value of a school's work is not accurately measured by the results of individual examination, as tabulated in a schedule ; and that two schools, in which the ratio of "passes" attained is the same, often differ materially in the quality of those passes, and in general efficiency as places of education. It is in order that these differences may be duly recognized

in calculating the grant that my Lords have caused the award of a substantial part of that sum to be dependent on the estimate you form of the merit of the school as a whole. Article 109 *b* specifies three particulars: (1) the organization and discipline; (2) the intelligence employed in instruction; and (3) the general quality of the work, especially in the elementary subjects. Thus the award of the merit grant will be the result of several factors of judgment. The quality as well as the number of the passes will necessarily rank as the most important of these factors, but inferences derived from them alone may be modified by taking into account the skill and spirit of the teaching, the neatness of the schoolroom and its appliances, the accuracy and trustworthiness of the registers, the fitness of the classification in regard to age and capacity, the behaviour of the children, especially their honesty under examination, and the interest they evince in their work. The Code also instructs you to make reasonable allowance for "special circumstances." A shifting, scattered, very poor, or ignorant population; any circumstances which make regular attendance exceptionally difficult; failure of health, or unforeseen changes among the teaching staff, will necessarily and rightly affect your judgment. It is needful, however, in all such cases, to have regard not only to the existence of special difficulties, but also to the degree of success with which those difficulties have been overcome.

SCHOOLS NOT ENTITLED TO MERIT GRANT.—FAIR SCHOOLS.

From bad or unsatisfactory schools it is manifest that the merit grant should be withheld altogether. The cases which you dealt with under Article 32 *b* of the former Code, and in which a deduction of one or more tenths was made for "faults of instruction or discipline,"

or in which you have not recommended the grant for "discipline and organization," would, of course, fall under this head. Other cases will occur which are not serious enough to justify actual deduction, but in which you observe that there is a preponderance of indifferent passes, preventible disorder, dullness, or irregularity; or that the teacher is satisfied with a low standard of duty. To schools of this class no merit grant should be awarded. But a school of humble aims, which passes only a moderately successful examination, may properly be designated "Fair" if its work is conscientiously done, and is sound as far as it goes; and if the school is free from any conspicuous fault.

GOOD SCHOOLS.

Generally, a school may be expected to receive the mark "Good" when both the number and the quality of the passes are satisfactory; when the scholars pass well in such class subjects as are taken up; and when the organization, discipline, tone, and general intelligence are such as to deserve commendation.

EXCELLENT SCHOOLS.

It is the intention of their Lordships that the mark "Excellent" should be reserved for cases of distinguished merit. A thoroughly good school in favourable conditions is characterized by cheerful and yet exact discipline, maintained without harshness and without noisy demonstration of authority. Its premises are cleanly and well-ordered; its time-table provides a proper variety of mental employment and of physical exercise; its organization is such as to distribute the teaching power judiciously, and to secure for every scholar—whether he is likely to bring credit to

the school examination or not—fair share of instruction and of attention. The teaching is animated and interesting, and yet thorough and accurate. The reading is fluent, careful, and expressive, and the children are helped, by questioning and explanation, to follow the meaning of what they read. Arithmetic is so taught as to enable the scholars not only to obtain correct answers to sums, but also to understand the reason of the processes employed. If higher subjects are attempted, the lessons are not confined to memory work and to the learning of technical terms, but are designed to give a clear knowledge of facts, and to train the learner in the practice of thinking and observing. Besides fulfilling these conditions, which are all expressed or implied in the Code, such a school seeks by other means to be of service to the children who attend it. It provides for the upper classes a regular system of home exercises, and arrangements for correcting them expeditiously and thoroughly. Where circumstances permit, it has also its lending library, its savings' bank, and an orderly collection of simple objects and apparatus adapted to illustrate the school lessons, and formed in part by the co-operation of the scholars themselves. Above all, its teaching and discipline are such as to exert a right influence on the manners, the conduct, and the character of the children, to awaken in them a love of reading, and such an interest in their own mental improvement as may reasonably be expected to last beyond the period of school life.

It is hardly to be expected that any one school will completely satisfy all these conditions, and it is impossible that in the course of a single visit of inspection your attention should be directed to so many particulars. But it will be well to keep all of them in view in forming your own standard of what the best schools should aim at; and my Lords do not wish the mark "excellent" to be given

to any school which falls short of that standard in any important respects, or which is not, in some of them at least, entitled to special praise.

The responsibility of recommending the merit grant, will, in every case, rest upon the Inspector, and should not be delegated to an assistant. My Lords do not require that you should state in fuller detail than you think desirable in your report on a school your reason for designating it as "fair," "good," or "excellent"; but in all cases in which you recommend that the grant should be withheld the grounds on which you do so should be briefly stated for the information and guidance of the managers.

END OF PART II.

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